.

```
Regult
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed
and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                               3559
3503.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 seq length: 0 seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein search, using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-646-873-42
3583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                March
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2443163 segs, 439378781 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9 8 7 6 5 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match
       111100
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A_Geneseq_21:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MDRVTRYPILGIPQAHRGTG......HKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenCore version
Copyright (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      geneseqp2003as:*
geneseqp2003bs:*
geneseqp2004s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               geneseqp2005s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           geneseqp2002s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  geneseqp2000s:*
geneseqp2001s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                geneseqp1990s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           geneseqp1980s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3, 2006, 13:19:17;
                                                  913
1103
1103
1103
1103
1103
1103
                                                                                                                                                                                                                                                                          679
679
679
679
679
215
215
215
215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAW79676
AAE07319
ADA26379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IJ
                                                                                                                                                                                                                                                                                                                           AAE07324
ADA26384
                                                                                                                                                                          ADJ70212
ADD45973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADN17172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADX97562
                                                                                                                                                                                                                               ABM85635
                                                                                                                                                                                                                                                                             AAG73987
                                                                                                                                                                                                                                                                                                      ADN17177
                                                                                                                                                                                                                                                                                                                                                                           AAW79681
                                                                                                                                                                                                                                                                                                                                                                                                       AAM79574
                                                                                                                                                                                                                                                                                                                                                                                                                           ADG14341
                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAM78590
                                                                                                                            ADJ75352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mode1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Search time 362.925 Seconds (without alignments)
822.038 Million cell updates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5.1.7
Biocceleration Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2443163
Aam78590 Human pro
Adg14341 Human NC2
Aam79581 Human CS1
Aae77324 Human CS1
Aae67324 Human CS
Ada26384 Synthetic
Adn171,77 CS198 pro
Aag73987 Human col
Abo60042 Human gen
Abo68045 Human pro
Adj70212 Human hea
Add45973 Human Pro
Adj75352 Marker ge
Adj75352 Marker ge
Adj75352 Marker ge
Adj75352 Marker ge
Adj75378 Human PRO
Adp23418 Human PRO
Adp23418 PRO polyp
Ady23408 PRO polyp
Ady14898 PRO polyp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Aaw79676 Human CS1
Aae07319 Human CS
Ada26379 Predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Adn17172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1dx97562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CS198 pro
Pancreati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          679
```

44	ω.	42	41	40	39	8	37	36	35	4	ü	32	31	30	29	28	27	26	25
173	173	175	175	175	175	175	176.5	177	177	180	189	189	189	189	190	195.5	195.5	199.5	205
4.4	4.	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	5.0	ა	5. <sub>3</sub>	ω	υ. Έ	ა ა	5 5	5 5	5 6	5.7
2468	2468	1008	35	35	35	35	1321	3262	3262	3149	36	36	36	36	57	1090	. 917	948	1103
7 '	) W	7	æ	6	4	N	9	9	7	7	œ	σ	4	N	4.	9	'n	6	9
ADE62719	ABR64281	AB080673	ADN17175 '	ADA26382	AAE07322	AAW79679	ADV97797	ADV97841	ADB79961	ADJ70520	ADN17173	ADA26380	AAE07320	AAW79677	AAG75071	ADY14900	ABP75463	ADA55374	ADY18598
_	Abr64281 Anglogene		Ξ.			_			•	Human	Adn17173 CS198 pep	_	-			_			

## ALIGNMENTS

RESULT 1 AAW79676 XXXXX Gastrointestinal tract; GI tract; cancer; disease; detection; CS198; human; predisposition; treatment; Barret's oesophagus; gastric ulcer; gastritis; leiomyoma; polyps; Crohn's disease; ulcerative colitis; AAW79676 standard; protein; 679 AA. Human CS198 protein. 11-JAN-1999 AAW79676; 31-MAR-1997; 30-MAR-1998; 08-OCT-1998 WO9844159-A1. Homo sapiens. pancreatitis. (first entry) 97US-00828855 98WO-US006251

(ABBO ) ABBOTT LAB

Billing-Medel PA, Cohen M, Colpitts TL, Granados EN, Hayden M, Hodges SC, Klass Roberts-Rapp L, Russell JC, Stroupe SD; Friedman PN, Gordon J; MR, Kratochvil JD;

WPI; 1998-542714/46.

CCCCCCXXXXPTXXXX New gastrointestinal polynucleotides, CS198, and their detection - used for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastritis.

Claim 26; Page 100-102; 127pp; English.

This sequence represents the human CS198 protein which is used in a method to detect the presence of a target CS198 polynucleotide in a test sample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be used in detecting, diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's ossophagus, gastric ulcer, gastritis, leiomyoma, polyps, Crohn's disease, and

```
S
                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                       뫄
                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                     음 성
                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ន្តដ្ឋន
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 679;
                              CS 198; gastrointestinal tract disease; GI tract; cancer; gastritis; Crohn's disease; ulcerative colitis; pancreatitis; Barret's oesophagus; gene therapy; drug screening; human.
                                                                     Human CS 198
           Homo
                                                                                            06-NOV-2001
                                                                                                                AAE07319;
                                                                                                                                   AAE07319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                       301
           sapiens
                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                601
                                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                      661
                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                                                                                                                                           REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                     NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                                                                                     SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                   standard;
                                                                                                                                                                                                                                          VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                         KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQQQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                  PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                      KNAMAERWESRIYASEEDD
                                                                                                                                                                                                        KNAMAERWESRIYASEEDD
                                                                                                                                                                                                                              VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                             KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                      PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                               REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ä
                                                                      protein
                                                                                           (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                   protein;
                                                                                           entry)
                                                                                                                                   679
                                                                                                                                                                                      679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 3583; DB 2;
Pred. No. 9.9e-290;
                                                                                                                                                                                                          679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                   gastric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                    ulcer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                  660
                                                                                                                                                                                                                                                                                           600
                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                               420
                                                                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                               660
                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

**장 유 장** 

μ

MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPRASGWGQDEPQTWPTDHRAQQG

VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE

VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE

60 60 120

문

```
The invention relates to a method of detecting the presence of a target CC S198 polynucleoride comprising contacting the test sample with at least one CS 198 specific polynucleotide. The method is useful for detecting CC one CS 198 specific polynucleotide. The method is useful for detecting CC diseases of the gastrointestinal (GI) tract organs, particularly cancer. CC The CS 198 polynucleotides, polypeptides and antibodies are useful for CC detecting, diagnosing, staging, monitoring, prognosticating, preventing, CC Ireating or determining predisposition to disease and conditions of the CG Itract such as cancer, gastric ulcer, gastritis, Crohn's disease, CC ulcerative colitis, pencreatitis and Barret's osophagus. The CS 198 CC polypeptides are useful as standards or reagents in diagnostic circumunoassays, as components or as target sites for various therapies. CC immunoassays, as components or as target sites for various therapies. CC immunoassays, as components or as target sites for various therapies. CC diagnostic tests and for screening for conditions or diseases associated CC with CS 198, particularly cancer. Monoclonal antibodies may also be used CC or the generation of chimeric antibodies for therapeutic use. The CS 198 polynucleotide is also useful in gene therapy and drug screening. The CC method of the invention provides an alternative, non-surgical diagnostic CC method capable of detecting early stage GI tract disease such as cancer. The present sequence is human CS 198 polypeptide
Best Loc
Matches
                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, corontacting test sample with at least one CS 198-specific polynucle
                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 17; Page 49-51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-496163/54.
N-PSDB; AAD13637.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Roberts-Rapp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Billingel PA,
Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (COHE/)
(COLP/)
(FRIE/)
(GORD/)
(GORD/)
(GRAN/)
(HAYD/)
(HODG/)
(KLAS/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (ROBE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US2001010904-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (HILL/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KRAT/)
                 Local Similarity
 679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COLPITS T L.
FRIEDMAN P N.
GORDON J.
GRANADOS E N.
HAYDEN M.
HODGES C.
KLASS M R.
KRATOCHVIL J D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BILLINGEL P A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COHEN
                                                                 679
 Conservative
                                                                 A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               , Cohen M,
Hayden M,
L, Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97US-00828855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98US-00050516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note= "Encoded by CGGN"
100.0%; Score 3583; DB 4;
100.0%; Pred. No. 9.9e-290;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                68pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Colpitts TL, Frie Hodges SC, Klass JC, Stroupe SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Friedman PN, Gordon
Lass MR, Kratochvil
                             Length
Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tract, comprises polynucleotide.
                                679;
0;
Gaps
```

```
RESULT 3
ADA263
ADA263
XX ADA22
XX ADA22
XX CS11
XX CS1
XX CS1
XX CS1
XX CS11

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                             cancer prognosticating; cancer prevention; gastrointestinal tract disorder; gene there
                                                                                                                                                                                                                                                                                                                                                                                                                                   CS198; cancer diagnosis; cancer staging; cancer monitoring cancer prognosticating; cancer prevention; cancer;
                                                                                                                                                             31-MAR-1997,
30-MAR-1998;
                                                                                                                                                                                                                             23-OCT-2002; 2002US-00278547
                                                                                                                                                                                                                                                                          01-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADA26379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADA26379 standard;
                     (BILL/)
(COHE/)
(COLP/)
(FRIE/)
(GORD/)
    (GRAN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               661
  BILLINGEL P A.
COHEN M.
COLPITTS T L.
FRIEDMAN P N.
GORDON J.
GRANADOS E N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OEREADLREQRGLROATDHOELVEIPTRPLLTKLSLITAPRRERGRPSLYVORDIVOETO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SQSSDLLERBRESYLRREQEVAEERRNALFPEVFSPTFDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SQSSDLLERERESVLRREQEVALERRNAL PEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                             97US-00828855
98US-00050516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CS198
                                                                                                                                                                                                                                                                                                                                                                                                                    therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          360
```

Similarity

0;

Indels

0;

```
Query Match
Best Local Sim
Matches 679;
                                                                                                                                                                                                                                                                                                                                                        comprises
detecting
                                                                                      The invention describes a method of detecting the presence of a target CS198 polynucleotide in a test sample. The method comprises contacting the test sample with at least one CS198 specific polynucleotide or its complement, and detecting the presence of the target CS198 polynucleotide in the test sample, where the CS198-specific polynucleotide has at least 50% identity to a polynucleotide having any of the 27 fully defined sequences of 34-2894 bp (S1-27) given in the specification, or their fragments or complements. The composition and methods are useful in diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition of an individual to, diseases and conditions of the gastrointestinal tract, e.g. cancer and in gene therapy. This is the predicted amino acid sequence of the human CS198 protein derived from the CS198 consensus sequence shown in seq id 27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Billingel PA,
Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (HAYD/)
(HODG/)
(KLAS/)
(KRAT/)
(ROBE/)
(RUSS/)
                                                                                                                                                                                                                                                                                                                                                                                         Detecting
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Roberts-Rapp L,
                                                              Sequence 679
                                                                                                                                                                                                                                                                                                                                                                                                                        2003-596961/56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HAYDEN M A.
HODGES S C.
KLASS M R.
KRATOCHVIL J
ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                        the presence of a target CS198 polynucleotide in a test sample contacting the sample with a CS198 specific polynucleotide and the presence of the target CS198 polynucleotide in the test
                                                                                                                                                                                                                                                                                                            Page
 100.0%; ilarity 100.0%; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                   , Cohen M,
Hayden MA,
L, Russell
                                                                Æ
                                                                                                                                                                                                                                                                                                              49-50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5.0
                                                                                                                                                                                                                                                                                                            67pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Colpitts TL,
Hodges SC,
JC, Stroupe
                                                                                                                                                                                                                                                                                                              English
 Score 3583; DB 6;
Pred. No. 9.9e-290;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Friedman
Klass MR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                      SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PN, Gordon
Kratochvil
                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ű,
```

```
문
 421
                                 421
                                                                                                    361
                                                                                                                                      301
                                                                                                                                                                    301
                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \mathbf{\mu}
                                                                                                                                                                                                                                                                                                                                                                                                                                     VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDBPQTWPTDHRAQQG
PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTÄEÅKÄÄTSPKÄTMSPRHLSESSGKPI
                       REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                    QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                       QEREADLREGRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                           NGHVVPIKPQVKGVVRBENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                                                                                                                   LBENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                          MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                                                                                                                                                                                         MKTYRLDAGDADERRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDERTPGPERSTE
                                                                                                                                                                                                                                                                                                                                                                                                              VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                      NGHVVPIKPQVKGVVRBENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                                                                                            LEENVVDREQU
                                                                                                                                                                                                                                                                            dflaarooflsleoankgaphsspargtpagttpgasoapkafnkphla
                                                                                                           420
                                                                                                                                                                           360
                                                                                                                                                                                                             300
                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
       480
                                       480
                                                                         420
                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                     180
```

8

문

밁 8 S

밁

8 밁 8 밁 á 밁

맑

0

```
RESULT 4
ADNIT7172
ID ADNIT 172
ADNIT7172
ADNIT7172
ADNIT7172
ADNIT 17-J
XX Gast
XX Gast
XX US2(
XX US2(
XX US2(
XX US2(
XX Gast
ACC
PF 22-J
XF 23-J
XF 23-J
XF 23-J
XF 24-J
XF 24-J
XF 25-J
X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
The invention relates to reagents and methods for detecting diseases of the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polynucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of diseases or conditions associated with aberrant expression or activity of the CS198 polypeptide, such as cancer
                                                                                                                                                                                                                                                                                                                                                               Billingel
Granados E
                                                                                                                                                  Claim 17;
                                                                                                                                                                                            detecting aberrant expression associated treatment methods.
                                                                                                                                                                                                                                                                                                                                          Roberts-Rapp
                                                                                                                                                                                                                                                                                                                                                                                                                                                   (KRAT/)
(ROBE/)
(RUSS/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (HAYD/)
(HODG/)
(KLAS/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (BILL/)
(COHE/)
(COLP/)
(FRIE/)
(GORD/)
(GRAN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31-MAR-1997;
30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22-AUG-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  04-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US2004043406-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gastrointestinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADN17172;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADN17172 standard; protein;
                                                                                                                                                                                                                                                                               2004-313754/29
ANK; D87440.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COLPITIS T L.
FRIEDMAN P N.
GRADON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
KLASS M R.
                                                                                                                                                                                                                                                                                                                                                                                                                          KRATOCHVIL J I
ROBERTS-RAPP I
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BILLINGEL P A. COHEN M.
                                                                                                                                                                                                                                                                                                                                                                  띶
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SQSSDLLERERESVLRREQEVAEERRNALFPEVFSFTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KQEASKPPRGCPQANRGVVRWEYFRLRPLRPRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                 PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTFDENSDONSRSSSOASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                  SEQ
                                                                                                                                                                                                             diseases such as cancer of the aberrant expression or activity
                                                                                                                                                                                                                                                                                                                                       , Cohen M,
Hayden MA,
L, Russell
                                                                                                                                                                                                                                                                                                                                          ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2003US-00646873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      世.
                                                                                                                                                ID NO 42; 67pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           97US-00828855.
98US-00050516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tract;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GI tract;
                                                                                                                                                                                                                                                                                                                                       Colpitts TL,
Hodges SC,
JC, Stroupe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            679
                                                                                                                                                  English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CS198; cancer;
                                                                                                                                                                                                                                                                                                                                       Friedman
Klass MR,
SD;
                                                                                                                                                                                                               gastrointestinal tract, k of the CS198 polypeptide,
                                                                                                                                                                                                                                                                                                                                                               PN, Gordon
Kratochvil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            therapy.
                                                                                                                                                                                                                                                                                                                                                             មិដ
                                                                                                                                                                                                                                 γď
                                                                                                                                                                                                                    and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          540
```

RESULT 5
ADX9752
ID ADX9
XX ADX9
XC ADX9
XX DZ 21-A
XX
DE Panc
XX
XX PAC

21-APR-2005 Pancreatic

(first entry)

pancreas tumor;

cytostatic

cancer associated

human

protein,

SEQ Ħ

sapiens

ADX97562

standard;

protein;

692

B

```
S
                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ន្តន្តន្តន្ត
                                               유
                                                                                            밁
                                                                                                                      S
                                                                                                                                                   밁
                                                                                                                                                                      S
                                                                                                                                                                                                     B
                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 protein used to illustrate the method of the
                                                                           601
                                                                                                    541
                                                                                                                           541
                                                                                                                                                      481
                                                                                                                                                                                481
                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                     301
                        661
                                                 601
                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                            MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATIQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             679
                                                                VSESPFFSP1HLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                             LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                KNAMAERWESRIYASEEDD
                                                                                                                  SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                      KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                     XQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQX
                                                                                                                                                                                                         PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                       PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                           REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                            REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                             QEREADLREQRELRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                              QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                 LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
KNAMAERWESRIYASEEDD
                                                VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                    SQSSDLLERERESVLRREQEVACERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                        679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 3583; DB 8;
Pred. No. 9.9e-290;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                           660
                                                                                                                            600
                                                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                   660
                                                                                                                                                       540
                                                                                                                                                                                 540
                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
```

EP1471075-A2

Ľ

```
ঠ
                                                                                                                           문
                                                                                                                                                                                       문
                                                                                                                                                                                                                   १
                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                ş
 밁
                     8
                                                              밁
                                                                                                                                                     र्
                                                                                                                                                                                                                                                                                                                                                                                                        The invention relates to a novel human nucleic acid sequence of the gancreas and its encoded protein. The invention further comprises:

CC proteins and peptides, preferably isolated, that contain a sequence concerned by the novel nucleic acid, and methods for diagnosis and treatment of pancreatic cancer, using a substance that inhibits or binds content protein or its DNA, including: an antisense oligonucleotide, short content molecule, particularly having a molecular weight below 5000, concerned by the pancreatic DNA, an aptamer or congenic molecule, particularly having a molecular weight below 5000, concerned by the pancreatic DNA, an aptamer or concerned by the pancreatic protein and the may be derivatized with a reporter concerned by the novel may be derivatized with a reporter concerned by the novel sequence and their encoding DNA have cytostatic compound, immunostimulant and/or radioisotope. The novel cancer. This sequence are useful for inhibiting transcription concerns of the invention. Note: This sequence is not shown in the pacification, it has been electronically downloaded from a DVD-rom concerning the pacification by the European Patent Office.
                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2004-768082/76.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rosenthal A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (HINZ/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31-MAR-2004, 2004EP-00090124.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lichtner R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31-MAR-2003; 2003DE-01015834.
                                                                                                                                                                                                                                                                                                                                                                                 Sequence 692 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (SPEC/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PILA/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DAHL/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 nucleic acid differentially expressed as diagnostic agents and in screening
                                                                                                                           134
 254
                           241
                                                            194
                                                                                           181
                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                   679;
                                                                                                                                                                                         74
                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                    14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DAHL E.
SPECHT T.
LICHTNER R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HINZMANN B.
ROSENTHAL A.
PILARSKY C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                diagnostic agents
                                                                                                                                                                                                                                                                                     μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADX97491.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 110; 28pp; German
                                                                                                                                           MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                         VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKB
                                                                                                                                                                                                                                                                      MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPBASGWGQDEPQTWPTDHRAQQG
                                                                                  LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                            MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                                                                      MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                             NGHVVPI KPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPI EREIRLA
                                                                                                                                                                                       VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Staub
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pilarsky
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ß
                                                                                                                                                                                                                                                                                                                                100.0%; Score 3583; DB 8;
100.0%; Pred. No. 1e-289;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        / C, Dahi s,
Roepcke S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dahl E,
                                                                                                                                                                                                                                                                                                                    <u>,</u>
                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Specht T,
Li X;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in pancreatic tumor tissue, for therapeutic agents.
                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bruemmendorf
                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                     692;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ή
                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     for
                                  300
                                                                                             240
                                                                                                                              193
                                                                                                                                                           180
                                                                                                                                                                                                                        120
   313
                                                                253
                                                                                                                                                                                           133
                                                                                                                                                                                                                                                       73
                                                                                                                                                                                                                                                                                        60
```

```
RESULT 6
AAM78590
ID AAM7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      묽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
03-FEB-2000; 2000US-00496914.
27-APR-2000; 2000US-00560875.
20-JUN-2000; 2000US-00598075.
19-JUL-2000; 2000US-00620325.
01-SEP-2000; 2000US-00654936.
15-SEP-2000; 2000US-00663561.
20-OCT-2000; 2000US-00693325.
30-NOV-2000; 2000US-00728422.
                                                                                                                                                                                                                                                                                                              Human; cytokine; cell proliferation; cell differentiation; vaccine; peptide therapy; stem cell growth factor; haematop tissue growth factor; immunomodulatory; cancer; leukaemia;
                                                                               Ma Y,
                                                                                                                                                                                                                                                                                                                                                       Human protein
                                                                                                                                                                                                                                                                                                                                                                            06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                AAM78590;
                                                                                                                                                                                                                                                                                                                                                                                                                    AAM78590
                                      WPI; 2001-476283/51.
N-PSDB; AAK51723.
                                                                                                                                                                                                                        05-FEB-2001; 2001WO-US004098
                                                                     Xue AJ,
                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                            (HYSE-)
                                                                  y, Zhao QA, 1
AJ, Yang Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                           HYSEQ INC.
                                                                                                                                                                                                                                                                                                       system disorder; arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VSESPFFSPIHLHSNYAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REEDHRREGIHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QEREADLREQRIGRATINGELVEIPTRPLLIKLSLITÄPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KNAMAERWESRI YASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                         SEQ ID
                                                                   Wang D, W
Wejhrman
                                                                             Drmanac RT,
Wang D, Wang
                                                                                                                                                                                                                                                                                                                                                                                                                   protein;
                                                                                                                                                                                                                                                                                                                                                         NO 1252.
                                                                     Ή
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          679
                                                                     Asundi V,
J, Zhang
Goodrich F
                                                                                                                                                                                                                                                                                                         inflammation.
                                                                               Ģ
                                                                               Zhou P,
J, Ren
                                                                                       ש
                                                                                'n
                                                                                          ž
                                                                                Chen
                                                                                          Ç
                                                                                          Cao
                                                                               Y;
Wang
                                                                                                                                                                                                                                                                                                                                      therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              553
```

Nucleic acids encoding in diagnosis and gene t

g polypeptides with cytokine-like activities, useful therapy.

```
RESULT 7
ADG14341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to polynucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoiesis regulating activity, tissue growth factor activity, immunomodulatory activity and activinyinhbin activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and inflammation. Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666 (AAM80020) are omitted as the relevant pages from the sequence listing were missing at the time of publication
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                           199
                                                                                                                                     661
                                                                                                                                                                                   109
                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  678;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                 VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LEENVVDREQIDFLAARQOFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                               SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTFDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                             KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGTRDAHQGRPTWALRPEDGEDKE
                                                                                               KNAMAERWESRIYASEEDD
                                                                                                                                     KNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3512-3514; 6221pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ٥,
                                                                                                                                       679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 3579; DB 4; Pred. No. 2.1e-289;
                                                                                               679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                660
                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                            600
                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

δ 片 δ 유 5 문 5

δ

301

QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ

유 성 문 δ 밁 δ 밁 S 밁 δ 문 ঠ g á ₽ र्

```
밁
                          δ
                                                        밁
                                                                                Ś
                                                                                                          밁
                                                                                                                                    δ
                                                                                                                                                                   밁
                                                                                                                                                                                          S
                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                            The present invention relates to human NC1, NC2 and NC3 proteins and coding sequences (ADG14340-ADG14345). The coding sequences are useful for detecting and screening proliferative insulin-producing cells as well as differentiation and proliferation of such cells and their precursors as analogous cells in treatment of e.g. PHHI and diseases due to differentiation/proliferation abnormality, diseases of the nervous system and pancreas. The coding sequences are also useful as spontaneous proliferation models of pancreas beta-cells. The novel genes NC1, NC2 and NC3 were isolated from the pancreas of PHHI patients, which were used in testing for the detection of proliferative insulin-producing cells or pancreas beta-cells by Northern analysis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Familial persistent hyperinsulinemic hypoglycemia of infancy (PHHI) patient-expressed genes for detecting and screening e.g. proliferatinsulin-producing cells in treatment of PHHI.
                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          neuroprotective
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; NC1; NC2; NC3; PHHI; pancreas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26-FEB-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-MAR-2002; 2002JP-00071592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-MAR-2003; 2003WO-JP002620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO2003078631-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADG14341 standard;
                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2003-767524/72.
  241
                                                        181
                                                                                   181
                           241
                                                                                                               121
                                                                                                                                          121
                                                                                                                                                                                                                                                                                  673;
                                                                                                                                                                      61
                                                                                                                                                                                                 61
                                                                                                                                                                                                                             \vdash
                                                                                                                                                                                                                                                     \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADG14344.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KANEKA CORP
                                                                                                                                                                                                                                                                                                                                        679
                                                                                                                               MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                    VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                          MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPBASGWGQDBPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 2; 34pp; Japanese
                 NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                           LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                         LDDNVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                               MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                      VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                             MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
  NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                        AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entry.
                                                                                                                                                                                                                                                                                              99.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     679
                                                                                                                                                                                                                                                                                 4;
                                                                                                                                                                                                                                                                               Score 3559; DB 7
Pred. No. 1e-287;
4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ζ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       beta-cell; insulin;
                                                                                                                                                                                                                                                                                                            7;
                                                                                                                                                                                                                                                                                 ν
••
                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                            679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             proliferative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antidiabetic;
                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                  Gaps
     300
                               300
                                                                                                                  180
                                                                                                                                          180
                                                                                                                                                                       120
                                                                                                                                                                                                 120
                                                                                                                                                                                                                             60
                                                           240
                                                                                      240
                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                    0
```

```
र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         문
                                                                       Tang YT, Liu C, ...
Ma Y, Zhao QA, W
                                                                                                                               03-FEB-2000;
27-APR-2000;
20-JUN-2000;
19-JUL-2000;
01-SEP-2000;
15-SEP-2000;
20-OCT-2000;
30-NOV-2000;
                                                                                                                                                                                                                                                                                               Human; cytokine; cell proliferation; cell differentiation; gene th vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorder; arthritis; inflammation.
                                                                                                                                                                                                                                                                                                                                                                                                      AAM79574 standard; protein; 672
                                                                                                                                                                                                                                                           WC200157190-A2
                                                                                                                                                                                                                                                                                                                                                                 06-NOV-2001
                                                                                                                                                                                                                    05-FEB-2001; 2001WO-US004098
                                                                                                                                                                                                                                        09-AUG-2001
                  Nucleic acids encoding polypeptides with in diagnosis and gene therapy.
                                              WPI; 2001-476283/51.
N-PSDB; AAK52707.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      661
 20;
                                                                                                                                                                                                                                                                                                                                              protein
                                                                                                              HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KNAMABRWESRIYASEBDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SQSSDLLERERESVLRREQEVAEERRNALFPEVFSFTFDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REEDHRREGKHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKDQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                               2000US-00598075.
2000US-00598075.
2000US-00620325.
2000US-00654936.
2000US-00654936.
2000US-00693251.
2000US-00693252.
                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                   2000US-00496914.
                                                                        ı C, Drmanac R'
2A, Wang D, W
g Y, Wejhrman'
                                                                                                                                                                                                                                                                                                                                               SEQ
                                                                                                                                                                                                                                                                                                                                               占
 6221pp; English
                                                                                                                                                                                                                                                                                                                                               NO 3220
                                                                                  Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                     679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      679
                                                                          Asundi V, ;
j J, Zhang J,
Goodrich R;
                                                                                                                                                                                                                                                                                                                                                                                                        A
                                                                           ָא<sup>ָ</sup> ק
                              cytokine-like activities,
                                                                                    Zhou P, ;
J, Ren F,
                                                                                              ž
                                                                                     chen
                                                                                    R, Cao
                                                                                                                                                                                                                                                                                                                            gene therapy,
                                                                                    Y;
Wang
                              useful
                                                                                      ; wz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360
```

RESULT 9
AAW79681
ID AAW7

AAW79681 standard; protein;

215

ጅ

```
X88888888888888
                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                             맑
                                                                                                                                                                                                                                                                                                 S
                                 밁
                                                           δ
                                                                                                                 8
                                                                                                                                                    밁
                                                                                                                                                                                δ
                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 666; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to polynucleotides (AAKS1456-AAK53435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoiesis regulating activity, tissue growth factor activity, immunomodulatory activity and activin/inhibin activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and inflammation. Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666 (AAM80020) are omitted as the relevant pages from the sequence listing were missing at the time of publication
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                       182
                                                                                                                                                                                                                                                                        362
                                                                                                                                                                                                                                                                                                     369
                                                                                                                                                                                                                                                                                                                                  302
                                                                                                                                                                                                                                                                                                                                                              309
                                                                                                                                                                                                                                                                                                                                                                                             242
                                                                                                                                                                                                                                                                                                                                                                                                                          249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             129
669
                                                                                           542
                                                                                                                       549
                                                                                                                                                      482
                                                                                                                                                                                   489
                                                                                                                                                                                                                422
                                                                                                                                                                                                                                           429
                                    602
                                                              609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GDADPRRICDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTPLEENVVDR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SVHAYTGOPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKEMKTYRLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LGIPQAH-RGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQGVQRQGVSY
                                                                                                                                                                                                                                                                                               GLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRIPPDAYQPY
                                                                                                                                                                                                                                                                                                                                                                                           EQIDELAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLANGHVVPIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTPLEENVVDR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKEMKTYRLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LGIPSGNTRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQGVQRQGVSY
                                                                                                            RERESVLRREQEVAEERRNALFPEVFSPTPDENSDONSRSSSQASGITGSYSVSESPFFS
                                                                                                                                                    RGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQKSQSSDLLE
                                                                                                                                                                                                              LSPGTPQLEFSAFGAFGKPSSLSTABAKAATSPKATMSPRHLSBSSGKPLSTKQEASKPP
                                                                                                                                                                                                                                       LSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLSTKQEASKPP
                                                                                                                                                                                                                                                                        EQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQREEDHRRE
                                                                                                                                                                                                                                                                                                                                                  BORGLROATDHOELVBIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQREBDHRRE
                                                                                                                                                                                                                                                                                                                                                                                                            PQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLAQEREADLR
   BSRIYASEEDD
                                    PIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGIDPSDGINSEVLEAIRVTRHKNAMAERW
                                                    PIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRHKNAMAERW
                                                                                             RERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVSESPFFS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          97.8%;
       679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 3503.5; DB 4;
Pred. No. 4.2e-283;
2; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             672;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          128
                                                                                                                                                                                                                                                                                                                                                                                                                              308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                          541
                                                                                                                                                                                       548
                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                 488
                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                          428
                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                    368
                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                         661
                                                                    899
                                                                                                 601
                                                                                                                               809
```

```
S
                                                   밁
                                                                            ঠ
                                                                                                          밁
                                                                                                                               S
                                                                                                                                                                 멍
                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                Query Match
Best Local 9
                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                    is used in a method to detect the presence of a target CS198 protein which polynucleotide in a test sample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be used in detecting, diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oseophagus, gastric ulcer, gastritis, leiomyoma, polyps, Crohn's disease, ulcerative colitis, and pancreatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New gastrointestinal polynucleotides, CS198, and their detection - for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastriti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Billing-Medel PA, Cohen M, Co
Granados EN, Hayden M, Hodges
Roberts-Rapp L, Russell JC, S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gastrointestinal tract; GI tract; cancer; disease; detection; CS198; human; predisposition; treatment; Barret's oesophagus; gastric ulcer; gastritis; leiomyoma; polyps; Crohn's disease; ulcerative colitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (ABBO ) ABBOTT LAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO9844159-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          pancreatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human CS198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAW79681;
                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-542714/46
                          645
                                                      121
                                                                                 585
                                                                                                                                        525
                                                                                                                                                                                              465
181
                                                                                                            61
                                                                                                                                                                                                                          al Similarity
215; Conserv
                                                                                                                                                                   щ
                                                                    NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINFS 644
                                                                                                                                                                                     MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                                                                                                                                                                                                                                                                                215
                DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                            VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
                                                                                                                                                                  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                                                      NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
                                                                                                             VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Page 103; 127pp; English.
                                                                                                                                                                                                                       31.6%; Scilarity 100.0%; F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                                                                                                                                                                                                                                Ą,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97US-00828855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98WO-US006251.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C-terminal
                                                                                                                                                                                                                       Score 1132; DB 2; ; Pred. No. 7.8e-86; 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Colpitts TL,
ges SC, Klass
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Stroupe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Friedman
MR, Krat
215
                          679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Iman PN, Gordon J;
Kratochvil JD;
                                                                                                                                                                                                                                                   Length 215;
                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gastritis.
                                                                                                                                                                                                                          0
                                                                                                                                                                                                                          Gaps
                                                      180
                                                                                                             120
                                                                                                                                                                  60
```

AAE07324 ID AAE XX

AAE07324

standard;

protein;

215

₿

Query Match Best Local S Matches 215

Local Similarity les 215; Conserv

Conservative

<u>,</u>

Mismatches

100.0%;

Score 1132; DB 4; Pred. No. 7.8e-86;

Length 215; Indels

0

Gaps

0

RESULT 10

```
CC CS 198 polynucleotide comprising contacting the test sample with at least CC one CS 198-specific polynucleotide. The method is useful for detecting CC diseases of the gastrointestinal (GI) tract organs, particularly cancer. The CS 198 polynucleotides, polypeptides and antibodies are useful for CC treating or determining predisposition to disease and conditions of the CS 198 polynucleotides, polypeptides and antibodies are useful for CC treating or determining predisposition to diseases and conditions of the CS Intract such as cancer, gastric ulcer, gastritis, Crohn's disease, CC ulcerative colitis, pancreatitis and Barret's oesophagus. The CS 198 polypeptides are useful as standards or resgents in diagnostic communoassays, as components or as target sites for various therapies. CC Antibodies directed against at least one epitope contained within these polypeptides are useful as delivery agents for therapeutic agents, in CC diagnostic tests and for screening for conditions or diseases associated CC with CS 198 particularly cancer. Monoclonal antibodies may also be used for the generation of chimeric antibodies for therapeutic use. The CS 198 polynucleotide is also useful in gene therapy and drug screening. The method of the invention provides an alternative, non-surgical diagnostic method capable of detecting early stage GI tract disease such as cancer. The present sequence is C-terminal portion of human CS 198 polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CS 198; gastrointestinal tract disease; GI tract; cancer; gas
gastritis; Crohn's disease; ulcerative colitis; pancreatitis;
                                                                                                                                                                                                                                                                                                                                                                                                                   Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, comprises contacting test sample with at least one CS 198-specific polynucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Billingel PA,
Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (HODG/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (GORD/)
(GRAN/)
(HAYD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (BILL/)
(COHE/)
(COLP/)
(FRIE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Barret's oesophagus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human CS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           06-NOV-2001
                                                                                                                                                                                                                                                                                                                                 The invention relates to a method of detecting the presence of a target CS 198 polynucleotide comprising contacting the test sample with at lea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (RUSS/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US2001010904-A1
                                                                                                                                                                                                                                                                                                                                                                                   Claim 17; Page 52-53; 68pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (ROBE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (KRAT/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GORDON J.
GRANADOS E N.
HAYDEN M.
HODGES S C.
KLASS M R.
KRATOCHVIL J I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FRIEDMAN P N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BILLINGEL P A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COHEN
 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cohen M,
Hayden M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97US-00828855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98US-00050516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      F 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gene therapy; drug screening; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C-terminal portion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Colpitts TL,
Hodges SC, KI
1 JC, Stroupe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SC, Klass MR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Friedman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PN, Gordon
Kratochvil,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gastric
```

```
RESULT 11
ADA26384
 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          १
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              닭
                                                                                                                                     Billingel PA,
Granados EN,
Roberts-Rapp
                                                                                                                                                                                                                                                                                                                                                                                                                          CS198; cancer diagnosis; cancer staging; cancer monitoring; cancer prognosticating; cancer prevention; cancer; gastrointestinal tract disorder; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADA26384 standard;
                                                                           Detecting the presence of a target CS198 polynucleotide in a test sample comprises contacting the sample with a CS198 specific polynucleotide and detecting the presence of the target CS198 polynucleotide in the test
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-NOV-2003
The invention describes a method of detecting the presence of a target CS198 polynucleotide in a test sample. The method comprises contacting the test sample with at least one CS198 specific polynucleotide or its complement, and detecting the presence of the target CS198 polynucleot.
                                                                                                                                                                                                                                                                                                                   31-MAR-1997;
30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                               23-OCT-2002; 2002US-00278547
                                                                                                                                                                                                                                                                                                                                                                    01-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                       US2003082619-A1
                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic
                                                 Claim 52;
                                                                                                                   WPI; 2003-596961/56
                                                                                                                                                                                                                                               (GORD/)
                                                                                                                                                                                                                                                                  (FRIE/)
                                                                                                                                                                                                                                                                           (COLP/)
                                                                                                                                                                                                         (KRAT/
                                                                                                                                                                                                                  (KLAS/)
                                                                                                                                                                                                 (ROBE/)
                                                                                                                                                                                                                             HODG/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                               GRANADOS E N.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
KLASS M R.
KRATOCHVIL J
ROBERTS-RAPP
                                                                                                                                                                                                                                                                 FRIEDMAN P
                                                                                                                                                                             RUSSELL
                                                                                                                                                                                                                                                                                      COHEN
                                                                                                                                                                                                                                                                                                BILLINGEL P A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVABERRNALFPEVFSPTPDENSDQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VMGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTFDENSDQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  peptide
                                                 Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first
                                                                                                                                     , Cohen M,
Hayden MA,
L, Russell
                                                                                                                                      ŗ
                                                                                                                                                                                                                                                                                                                   97US-00828855.
98US-00050516.
                                                  52;
                                                                                                                                                                            ري
دي
                                                                                                                                                                             ٥٥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    based
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein;
                                                                                                                                                                                                                                                                   Z F
                                                 67pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       entry)
                                                                                                                                                                                                 - 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                      Colpitts TL,
Hodges SC,
JC, Stroupe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CS198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein
                                                                                                                                       Klass
SD;
                                                                                                                                                 Friedman
Klass MR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  679
                                                                                                                                                 PN, Gordon
Kratochvil
  polynucleotide
                                                                                                                                                 g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
```

```
RESULT 12
ADN17177
ID ADN17
                                                                                                                                               밁
                                                                                                                                                                           ঠ
                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                          និនិនិនិនិនិនិនិនិនិ
                                                                                                            S
                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                   in the test sample, where the CS198-specific polynucleotide has at least 50% identity to a polynucleotide having any of the 27 fully defined sequences of 34-2894 bp (S1-27) given in the specification, or their fragments or complements. The composition and methods are useful in diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition of an individual to, diseases and conditions of the gastrointestinal tract, e.g. cancer and in gene therapy. This is the amino acid sequence of a synthetic peptide based on the predicted human CS198 protein sequence derived from the CS198 consensus sequence shown in seq id 27.
                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
    ADN17177
                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                 645
                                                                                                                                                                              585
                                                                                                                                                                                                                                              525
                                                                                                                                                                                                                                                                                                             465
                                                                                 181
                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                         al Similarity
215; Conserv
                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                             μ.
                                                                                                                                                                                                                                                                                                   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRFLRFRAPDEPQQAQVPH
                                                                                                                                                                                                                                                                                                                                                                                                          215
                                                                                                                                                                                                                                  VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
    standard;
                                                                                                                                               NSRSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDEVDSAFPGQRKKEQWYAGINPS
                                                                                                                                                                   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPFGQRKKEQWYAGINPS
                                                                                                                                                                                                                                                                             MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                                                                                                     DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                VWGWEVAGAPALRIQKSQSSDILERERESVIRREQEVAEERRNALFPEVFSPTPDENSDQ
                                                                                 DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                          Å
    protein;
                                                                                                                                                                                                                                                                                                                                        31.6%; bu
100.0%; Pr
    215
                                                                                                                                                                                                                                                                                                                                             Score 1132; DB 6;
Pred. No. 7.8e-86;
D; Mismatches 0;
                                                                                                                    679
                                                                                    215
                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                     180
                                                                                                                                                                                   644
                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                 584
                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                  524
                                                                                                                                                                                                                                                                                                                                                0
```

```
Billingel PA,
Granados EN,
                                                                                                                                                                                                                                                   Unidentified
                                                                                                                                                                                                                                                                     Gastrointestinal tract;
                                                                                                                                                                                                                                                                                        CS198 protein
                                                                                                                                                                                                                                                                                                           17-JUN-2004
                                                                                                                                                                                                                                                                                                                              ADN17177;
                                                                                                                                                                        31-MAR-1997;
                                                                                                                                                                                           22-AUG-2003; 2003US-00646873
                                                                                                                                                                                                             04-MAR-2004
                                                                                                                                                                                                                                US2004043406-A1
                                                                                                                (FRIE/
                                                                                                                         (COLP/
                                                                                                                                                                30-MAR-1998;
                                                                  (KLAS/
                                                                                    (HAYD/
                                                                                                       (GORD/
                                                                                                                                             (/TITE
                                                         KRAT,
                                                                                               GRAN/
                          COHEN M.
COLPITTS T L.
COLPITTS T L.
GRANAN P N.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
KLASS M R.
KRATOCHVIL J C.
RUSSELL J C.
STROUPE S D.
                                                                                                                                            BILLINGEL P
Cohen
Hayden
                                                                                                                                                                                                                                                                                                           (first
                                                                                                                                                                                                                                                                                        #2
                                                                                                                                                               97US-00828855.
98US-00050516.
                                                                                                                                            Þ
                                                                                                                                                                                                                                                                                                            entry)
₹.3
                                                ۲
                                                                                                                                                                                                                                                                       GI tract;
Colpitts TL,
Hodges SC,
                                                                                                                                                                                                                                                                       CS198;
  Klass
 Friedman
Klass MR,
                                                                                                                                                                                                                                                                       cancer;
  PN, Gordon
Kratochvil
                                                                                                                                                                                                                                                                      gene
                                                                                                                                                                                                                                                                       therapy.
  ជូរៈ
```

```
RESULT 13
AAG73987
ID AAG73
XX AAG73
XX AAG73
XX AAG73
XX Human
XX Human
XX Human
XX Homo
XX Rober
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TX RX FFF X RX SOSSOSSOSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Simi
Matches 215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to reagents and methods for detecting diseases of the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polynucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of diseases or conditions associated with aberrant expression or activity of the CS198 polypeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 protein used to illustrate the method of the
 N-PSDB; AAH33418
                WPI; 2001-235357/24
                                                Ruben SM,
                                                                                                            29-SEP-1999;
03-NOV-1999;
                                                                                                                                                           28-SEP-2000; 2000WO-US026524.
                                                                                                                                                                                             05-APR-2001.
                                                                                                                                                                                                                           WO200122920-A2
                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                           colorectal carcinoma
                                                                                                                                                                                                                                                                                                           Human; colon cancer; colon
                                                                                                                                                                                                                                                                                                                                         Human colon cancer antigen protein SEQ ID NO:4751.
                                                                                                                                                                                                                                                                                                                                                                         03-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                         AAG73987;
                                                                                                                                                                                                                                                                                                                                                                                                                                       AAG73987 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 17; SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Diagnosing diseases such as cancer of the detecting aberrant expression or activity associated treatment methods.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Roberts-Rapp
                                                                                (HUMA-) HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2004-313754/29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NSRSSSQASGITGSYSVSBSPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                                                Barash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ŗ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŗ
                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ID NO 47; 67pp; English.
                                                                              GENOME SCI INC.
                                                                                                            99US-0157137P.
99US-0163280P.
                                                SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31.6%; Score 1132; DB 8; 100.0%; Pred. No. 7.8e-86; tive 0; Mismatches 0;
                                                  Birse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'n
                                                                                                                                                                                                                                                                                                           cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                       172 AA
                                                  E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Stroupe
                                                                                                                                                                                                                                                                                                          antigen; diagnosis; detection;
                                                  Rosen
                                                g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gastrointestinal tract, b of the CS198 polypeptide,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       γģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

Ś

SPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINESDGINSEVLEAIRVTRHKNAMAER

SPIHLHSNVAWTVEDXVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRHKNAMAER

160 667

밁 Ś 밁

> 899 101 809

WESRIYASEEDD

679

```
Nucleic acids encoding 4277 human colon cancer-associated useful for preventing, diagnosing and/or treating colorect
Claim 11; Page 6550-6551; 9803pp; English
                                                                               sociated polypeptides, colorectal cancers.
```

cancer-associated nucleic acid molecules (N) and proteins (P), where the CC proteins are collectively known as colon cancer antigens. The colon cancer antigens have cytostatic activity and can be used in gene therapy CC and vaccine production. N and P may be used in the prevention, diagnosis CC example, N and P may be used to treat disorders associated with inappropriate P expression. For CC example, N and P may be used to treat disorders associated with decreased CC expression by rectifying mutations or deletions in a patient's genome CC supplement the patients own production of P. Additionally, N may be used to produce the colon cancer-associated Ps, by inserting the nucleic acids CC into a host cell and culturing the cell to express the proteins. N and P CC can be used in the prevention, diagnosis and treatment of colorectal CC carcinomas and cancers. AAH37196 to AAH37204 and AAB77789 represent CC sequences used in the exemplification of the present invention. N B. CC Pages 666 to 682 and page 7053 of the sequence listing were missing at time of publication, meaning no sequences are present for SEQ ID NO:1027 CC to 1052, 7921 and 7922 Sequence 172 AA;

```
밁
밁
                    Ş
                                                               Ş
                                                                                    Query Match
Best Local Similarity
Matches 167; Conserv
                        548
                                                                   488
  41
                                              1 PTRPPQANRGVVRWEYFRLRPLRFR------
            ERERES YLRREQEVAEERRNALF PEVFS PTPDENSDQNSRSSSQASGITGSYSYSES PFF
                                                           ERERESVLRREQEVXEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVSESPFF
                                                                                      Conservative
                                                                                                 23.4%;
                                                                                        <u>,,</u>
                                                                                        Score 839; DB 4;
Pred. No. 1.6e-61;
0; Mismatches 5
                                                                                        5
                                                                                                           Length 172;
                                                                                         Indels
                                            -APALRLQKSQSSDLL
                                                                                        20;
                                                                                        Gaps
  100
                        607
                                              40
```

```
ABO60042 standard; protein;
                                                  161
                                                  WESRIYASEEDD
 3
 ₿
```

```
RESULT 14
ABO60042
ID ABO60
XX ABO60
XX ABO60
XX 29-JU
XX Humar
XX Humar
XX Homo
DS Homo
XX Blee
DO 16-OC
XX DF O3-AI
PA (PENN
PA (PENN
                                                                                                                                    Human; gene expression; single exon probe; microarray; alternative splicing event; genomic alteration.
                                                                                                                                                                    Human genome derived single exon protein #6276
                                                                                                                                                                                        29-JUL-2004
                                                                                                                                                                                                             ABO60042;
                                                                                            US2003194704-A1
                                                                                                                                                                                        (first entry)
```

03-APR-2002; 2002US-00029386 03-APR-2002; 2002US-00029386

(PENN/) PENN S G. (RANK/) RANK D R.

16-OCT-2003

```
ABM85635
ID ABM85635
AC ABM85
AC ABM85
XX ABM85
XX T18-NC
XX T18-NC
XX CYtos
XX Humar
XX Humar
XX Humar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CC encoding at least 8 amino acids of any of the 6888 amino acids esquences of fully defined in the specification. The probe is a single exon probe that CC hybridises under high stringency conditions to a nucleic acid molecule capressed in human cells or tissues. Also included are a spatially-cc addressable set of single exon nucleic acid probes for measuring human cells or tissues. Also included are a spatially-cc addressable set of single exon nucleic acid probes for measuring human gene expression, a vector comprising the plurality of probes is separately comeasuring human gene expression, a vector comprising the single exon cc exon microarray for measuring human gene expression, a vector comprising the single exon cc probe cited above, an ORP-encoded peptide comprising at least 8 c grobe cited above, an ORP-encoded peptide comprising at least 8 c grobe cited above, an order-encoded peptide comprising at least 8 c grobe cited above, an order-encoded peptide comprising at least 8 c grobe cited above, and c grobe contiguous amino acids of any of the above-mentioned amino acid sequences (optionally with conservative amino acid substitutions), an c grobe cited above, that binds specifically to a peptide cited above, c feet any of the subscription, and a computer-readable c storage medium which contains a database having a plurality or records c expression analysis. The probes may be used as trools for surveying c issues to detect the presence of expression of a single exon probe c cated above. The probes may be used as trools for surveying c smaller genomic alterations, in detecting and characterising gross single exon probe probes are used in identifying and characterising gross c feedata. sproads the order part of the printing the synthesis of nucleic acids, or in expressing the ORF-encoded peptide. The present sequence is a human c single exon probe protein of the invention. Note: The sequence is a human c single exon probe corder of the invention. Sequence data for this parent did not form part of the printe
                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                            ફ
                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity Matches 43; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequences in the specification, or their complements or fragments, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to a nucleic acid probe for measuring human gene expression, comprising any of the 27,400 fully defined nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 45; SEQ ID NO 33676; 80pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New human genome-derived single exon nucleic acid probes useful for human gene expression analysis, for identifying or characterizing alternative splicing events, for assessing genomic alterations or as tools for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2004-119264/12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (HANZ/) HANZEL D
    Homo sapiens
                                             Cytostatic; carcinoma; lymphoma; cancer; human
                                                                                    Human protein sequence hCP44130
                                                                                                                                    18-NOV-2004
                                                                                                                                                                                                                         ABM85635 standard; protein; 910 AA.
                                                                                                                                                                                                                                                                                                                                                                              595 ITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQW 637
                                                                                                                                                                                                                                                                                                                                     μ
                                                                                                                                                                                                                                                                                                                                     ITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQW 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rank DR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hanzel
                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 236; DB 8;
Pred. No. 4.4e-12
                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                            4.4e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 43;
                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                            <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                              ٥,
```

```
S
                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
S
                                                                            S
                                                                                                                         밁
                                                                                                                                                             S
                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 155;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention relates to novel DNA and protein sequences which are associated with carcinomas. The sequences are useful for: (i) for screening of bloactive agent capable of binding to Carcinoma Associated Protein (CAP); (ii) for screening of a bioactive agent capable of modulating the activity of CAP; (iv) for evaluating the effect of a candidate carcinoma drug; (v) for diagnosing carcinoma; (vi) for inhibiting the activity of CAP; (iv) for treating carcinoma; (vii) for neutralizing the effect of CAP; (ix) as a biochip; carcinoma; (viii) for neutralizing the effect of CAP; (ix) as a biochip;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (x) for diagnosing carcinoma or a propensity to carcinoma, and (xi) for determining Carcinoma Associated (CA) gene copy number. In addition, the CA genes are useful as markers of carcinoma including lymphoma. The present sequence is one such CAP. Note This patent is an equivalent to basic patent US2002182586A1, for which me the cap are useful as markers of carcinoma including lymphoma. The present sequence is one such CAP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 5; SEQ ID NO 1320; Opp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Recombinant nucleic acid useful for diagnosis and treatment of carcinoma comprises a nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-MAR-2002; 2002US-00087192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28-FEB-2003; 2003WO-US006235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO2003073826-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (SAGR-) SAGRES DISCOVERY.
                                                                                                                                                                                                                                                                                                                                                                        336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100
                                                                                                                                                                                                                                                  276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RDAHQGRPTWALRPEDGEDKEMKTYRLDAGDADP-RRLCDLERERWAVIQGQAVRKSSTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         910 AA;
                                                                                                                                                               LSLITAPRR-----
                                                                                                                                                                                                                                                                                                                                                                                                               PPRSTPLEENVVDR-----EQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTP--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RAPHEDKKPSKLFEDDEHEKEQYCIR----KVRPSEEMLELEKERRELIRSQAVKKNPGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               data was
                                                                                QPGLRRALSSDSILSPAPDARAADPAPEVRKVNRIPPDAYQPYLSPGTPQLE-----
                                                                                                                                                                                                                                                                                                                                                                        APASSHERASMIDKAKEDIVTEQIDFSAARKQFQLMENSRQAV-----AKGQ---STPRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAKWWNPPQEKTIEEQLDEEHLESHKKYKERKERRAQQEQLLLQKQLQQQQQQPPSQLCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AT-----LQGTPDHGDPRTPG----
  ----FSAFGAFGKPSSLSTA----
                                          ---VLETLSNDFSMDNISDSGASN----ETTNALQENSLADFSLFQTFQTDNPSEGRGE
                                                                                                                           DGEFTSARAVLTVVKDDDHGILDQFSRSVNVSLTQEELDSGLDELSVRSQDTT-----
                                                                                                                                                                                                                                             PGSLASVESPGTPKETPIEREIRLAQEREADLRE--QRGLRQATDHQELVBIPTRPLLTK 333
                                                                                                                                                                                                                                                                                            FSIKPFYRPLGSVNSDKPLTNP-
                                                                                                                                                                                                         PGALETPSAAGSQGNT-----ASQGKEGPYSEPSKRG------PLSKLWAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               published
                                                                                                                                                                                                                                                                                                                                -GASQAPKAFNKPHLANGHVVPIKPQVKGVVRBENKVRAVPTWASVQVVDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5.7%;
19.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        105;
                                                                                                                                                                 ERGRPSLYVORDIVOETOREEDHRREGLHVGRASTPDWVSEGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 205; DB 7;
Pred. No. 1.7e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                              --RPPSVGGPPEDSGASAAKGQKS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 910;
      --EAKAATSPKA-TMSPRHLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels 292;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Note:
```

GVSKSFSDHGFYSPSSTLGDSPLVDDPLEYQAGLLVQNAIQQAIAEQVDKAVSKTSRDGA

471 576 437 524 385 471 275

387

431

335

174

Search completed: March 3, 2006, 13:35:1 Job time: 366.925 secs

Ţ

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Run on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
   189.5

168.5

168.5

167.

166.

166.

164.5

169.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

159.

15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-646-873-42
3583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 283416 seqs, 96216763 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MDRVTRYPILGIPQAHRGTG......HKNAMAERWESRIYASEEDD 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                March 3, 2006, 13:26:31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIR 80:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                 T00636
T42730
T42761
T38459
I38346
A46194
RBHUBAF
T00365
T09225
T03454
T023454
A12284
A122344
A12344
A12623
A43359
A43359
A43359
A43359
A4536423
A46523
A46523
A46523
A46523
A46523
A465263
T14664
T145664
T145664
T145664
T145664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Search time 42.8912 Seconds (without alignments) 1523.185 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             283416
                                                                                                ALR protein - huma translation initia hypothetical protein microcubule-associ immediate-early propothetical prote spA2 protein youthetical prote exo-alpha-sialidas tight junction proteypothetical prote exo-alpha-sialidas tight junction proteypothetical protesypothetical protesypoth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           hypothetical prote
Bassoon protein -
Bassoon protein -
Hypothetical diver
elastic titin - hu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          neurofilament prot adenomatous polypo hypothetical prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Description
hypothetical prote
glucan 1,4-alpha-g
adenomatous polypo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              kinase anchor pr
          5
```

<b>.4</b> .	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30
143	143	143.5	143.5	144	144.5	144.5	144.5	145	145	145	145.5	145.5	146	147	147.5
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.1	4.1	4.1	4.1	4.1
666	660	6642	1634	2339	1743	891	880	4162	1744	1390	2142	1027	1323	531	541
N	۲	N	N	N	N	N	N	N	N	N	N	N	N	N	N
B70803	QQBE3	T29757	T26517	A42566	T15893	T22560	D89756	T42633	A54970	T14004	B35098	T46481	T00037	T08760	T19304
nypornerical proce	BHLF1 protein - nu	protein UNC-89 - C	ä	omega-conotoxin-se	hypothetical proce		-	connectin/titin -	tensin, cardiac mu	crra procesn - sii	-	car p		Cal	

	14 2 A54970  42 A54970  43 2 A54970  44 2 A54970  45 2 T42633  46 2 T18893  47 27566  48 2 T15893  48 2 T2566  49 2 T29757  40 2 T29757  40 1 QQBE3  40 1 QQBE3  41 2 T39803  41 2 T39803  41 3 T3893  41 42 56  42 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	tria protein - sil tensin, cardiac mu connectin/titin - protein T23E7.2b [ hypothetical prote hypothetical prote omega-conotoxin-se hypothetical prote grotein UNC-89 - C BHLF1 protein - hu hypothetical prote hypothetical prote BH.F1 protein - hu hypothetical prote
	- human  _revision 01-Feb-1999 #text_change ( _revision 01-Feb-1999 #text_change ( _,; Skowronski, E.; Adamson, A.W.; .; Bruce, R.; Quan, G.; Montgomery, .; Bruce, R.; Adamson, A.W.; .; Bruce, R.; Adamson, G.; Montgomery, .; Bruce, R.; Adamson, G.; Montgomery, .; Bruce, R.; Adamson, G.; Montgomery, .; Bruce, R.; Quan, G.; Montgomery, .; Bruce, R.; Adamson, G.; Montgomery,	04 -Schultz, K.; D.; Nolan, M. C34 and D1983 C34 and D1983
	Query Match Best Local & Matches 679	; ), Gaps 0; Трнкаоос 60
·	Qy 1 MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG	
÷	121 121	
	OY 181 LEENVVDREQIDFLAARQOFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA	KAFNKPHLA 240          KAFNKPHLA 240
	Qy 241 NGHYVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETDIEREIRLA	PIEREIRLA 300          PIEREIRLA 300
	Qy 301 QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ	RDIVQETQ 360           RDIVQETQ 360
	Qy 361 REEDHRREGLHVGRASTPDWYSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI	PEVRKVNRI 420         PEVRKVNRI 420

Qy 258ENKVRAVPTWASVQVV 273	Db 888 AQKASARPRPESSQEPKR-RLPHNATTGYEELLSEAGPAEPTDSSGALQGGLRRFKTIEL 946	PAGTTPGASQAPKAFNKPHLANGHVVPIKPQVKGV	Db 830 VEDSSEGGLSPLPPQPPARADMTDEEFWRRQILEMSAEEDNILEEDDTAVSGRGLAKHS 887	774 KRRPHSLSIMPEAFDSD-BELGDILEEDDSLAWGROREQQDTAESSDDFGSQLRHDY	Db 726 VTGPRPPSPSELHKVGSSLRPSLEAQAVAPSAEWSKPPRSSSSAVEDQ 773  Qy 120 EMKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHG 168	Qy 76QPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDK 119	QY 38 PEASGWGQDEPQTWPTD-HRAQQGVQRQGVSYSVHAYTG75	Query Match 5.3%; Score 189; DB 2; Length 3942; Best Local Similarity 20.1%; Pred. No. 0.016; Matches 165; Conservative 102; Mismatches 252; Indels 302; Gaps 39;	Function:  Description: may be involved in cytomatrix organization at the site of neurotransmitte;  Note: component of the presynaptic cytoskeleton;  Keywords: coiled coil; zinc finger	Map postition: 9F1 ;Introns: 72/2; 208/3; 505/3; 675/3; 2889/3; 3582/1; 3851/3; 3886/1; 3930/1 ;Note: bassoon	1-3942 CDIE> 1-3942 CDIE> erences: UNIPROT:088737; UNIPARC:UPI0000029B58; EMBL:Y17034; NID:g3413809; PI tal source: strain 129 SVJ	A;Accession: T42730 A;Status: preliminary; translated from GB/EMBL/DDBJ A;Molecule type: DNA	A;Reference number: Z22249; MUID:98345363; PMID:9679147	C;Date: 11-Jan-2000 #Bequence_revision 11-Jan-2000 #text_change 09-Jul-2004 C;Accession: T42730 C;Accession: T42730 R;Dick, S.; Sanmarti-Vila, L.; Langnaese, K.; Richter, K.; Kindler, S.; Soyke, A.; Wex, T. Colck, S.; Sanmarti-Vila, L.; Langnaese, K.; Richter, K.; Kindler, S.; Soyke, A.; Wex, T. Colck, S.; Sanmarti-Vila, L.; Langnaese, K.; Richter, K.; Kindler, S.; Soyke, A.; Wex, T. Colck, S.; Sanmarti-Vila, L.; Langnaese, K.; Richter, K.; Kindler, S.; Soyke, A.; Wex, T. Colck, S.; Sanmarti-Vila, L.; Langnaese, K.; Richter, K.; Kindler, S.; Soyke, A.; Wex, T. Colck, S.; Sanmarti-Vila, L.; Langnaese, K.; Richter, K.; Kindler, S.; Soyke, A.; Wex, T. Colck, S.; Sanmarti-Vila, L.; Langnaese, K.; Richter, K.; Kindler, S.; Soyke, A.; Wex, T. Colck, S.; Sanmarti-Vila, L.; Langnaese, K.; Richter, K.; Kindler, S.; Soyke, A.; Wex, T. Colck, S.; Sanmarti-Vila, L.; Langnaese, K.; Richter, K.; Kindler, S.; Soyke, A.; Wex, T. Colck, S.; Sanmarti-Vila, L.; Langnaese, K.; Richter, K.; Kindler, S.; Soyke, A.; Wex, T. Colck, S.; Sanmarti-Vila, L.; Langnaese, K.; Richter, K.; Kindler, S.; Soyke, A.; Wex, T. Colck, S.; Sanmarti-Vila, L.; Langnaese, K.; Richter, K.; Kindler, S.; Soyke, A.; Wex, T. Colck, S.; Sanmarti-Vila, L.; Langnaese, K.; Richter, K.; Kindler, S.; Soyke, A.; Wex, T. Colck, S.; Sanmarti-Vila, L.; Langnaese, K.; Richter, K.; Kindler, S.; Soyke, A.; Wex, T. Colck, S.; Sanmarti-Vila, L.; Langnaese, R.; Richter, K.; Kindler, S.; Soyke, A.; Wex, T. Colck, S.; Sanmarti-Vila, L.; Langnaese, R.; Richter, R.; R	us (hous	61 KNAMAERWESRIYASEEDD 67	661 KNAMAERWESRIYASEEDD 679	541 SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS		421 PPDAYQP 421 PPDAYQP	
Db 757 RRPHSLSIMPEĀFDSD-EELGDILEEDDSLAMGRQREQQDTAESSDDFGSQLRHDYV 812	QY 121 MKTYRLDAGDADERRLCDLERERWAVIQGQAVRKSSTVATLQGTEDHG 168	Db 710 VTGPRPPSPSELH	Qy 76QPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE 120	38	Query Match 5.0%; Score 179.5; DB 2; Length 3938; Best Local Similarity 20.0%; Pred. No. 0.056; Matches 161; Conservative 102; Mismatches 249; Indels 291; Gaps 39;	s: coiled coil; zinc finger	A; Experimental source: strain Sprague Dawley; brain C; Function:  A; Description: may be involved in cytomatrix organization at the site of neurotranses.  A; Description: may be involved in cytomatrix organization at the site of neurotranses.	A;Status: preliminary; translated from GB/EMBL/DDBJ A;Molecule type: mRNA A;Residues: 1-3938 <die> A;Cross-references: UNIPROT:088778; UNIPARC:UPI0000E7EDE; EMBL:Y16563; NID:g341</die>	Cell Biol. 142, 499-509, 1998 Title: Bassoon, a novel zinc-finger CAG/Glutamine-repeat protein select Reference number: Z22249; MUID:98345363; PMID:9679147 Accession: T42761	C;Species: Rattus norvegicus (Norway rat) C;Date: 11-Jan-2000 #sequence_revision 11-Jan-2000 #text_change 09-Jul-2004 C;Accession: T42761 B. Nicole C. Gameri-Wils I. Languages K. Bichter K. Kindler S. Sovke	RESULT 3 T42761 Bassoon protein - rat N.Alrermate names, brain-specific symanse-associated protein	DD 1335 SISISDESGENTEDAKAIĞH	639 AGINPSDGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD	QY 585 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWY 638	QY 525 VMGMEVAGAPALRLQKSQSSDLLERERESVLRREQEVABERRNALFPEVFSPTPDENSDQ 584	Qy 485SKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH 524 i:	Qy 432 GTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLSTKQEA 484	QY 375 ASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRIPPDAYQPYLSP 431	Qy 315 QATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQRBEDHRREGLHVGR 374 : ::::  : : :     :	Qy 274 DDPGSLASVESPGTPKETPIEREIRLAGEREADLREGRGLR 314	The second secon

```
375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      064 R--EQEKMREVEQQRIRS----TARKTRRDKEELRAQR------RRE----R 1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            315 QATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQREEDHRREGLHVGR 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     947 NSTGSYGHELDLGQGPDPNLDREPELEMESLTGSPEDRSRGEHSSTLPASTPSYTS---G 1003
                                                                                     639 AGINPSDGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679
                                                                                                                                                                                                                                                                         585 NSRSSQASGIT-----GSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPFGQRKKEQWY 638
                                                                                                                                                                                                                                                                                                                                                               246 DYG----GRASQPVAESTPAGLGAAVYEEILQTSQSIARMR-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                         525 VWGWEVAGAPALRLOKSOSSDLLERERESVLRREQEVABERRNALFPEVFSPTPDENSDO 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   198 YEDMMRKAEMLQRQQGQVAGARGPHGGPSQPTGP-----RSQGSPEYQDTQ-DH 1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100 SKTP------PŚNLŚPIEDASPTEELRQAAEMEELHRSSCSEYSP---- 1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1063 TSPTSLSSLEEDSDSSPSRRQRLEEAKQQRKARHRSHGPLLPTIEDSSEEEELREEEELL 1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           274 DDPGSLASVE-----SPGTPKETPIEREIRLAQER------EADLREQRGLR 314
STSTSSDSSGGRVIPDVRVTQH-----FAKEPQD 1363
                                                                                                                                                                               --- QASSRDLGFTEDKKKEKQFLNAESAYMDPMKQNGGPLTPGTSPTQLAAPVS---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTPQLEFSAFGAFGKPSSLSTAEAK-----AATSPKATMSPRHLSESSGKPLSTKQEA 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ASTPDWVSEGPQPGLRRALSSDSILSPAPDARAAD---PAPEVRKVNRIPPDAYQPYLSP 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -SPSIDSEAETLDGGPTRLYKSGSEYNLPAFMSLYSPTETPSGSSTTPSSGRPLKSAEEA 1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ----SKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH 524
```

e names: brain-specific synapse-associated protein
Rattus norvegicus (Norway rat)
-Jan-2000 #sequence\_revision 11-Jan-2000 #text\_change 09-Jul-2004
n: T42761 5.0%; Score 179.5; DB 2; al Similarity 20.0%; Pred. No. 0.056; 161; Conservative 102; Mismatches 249; .; Sanmarti-Vila, L.; Langnaese, K.; Richter, K.; Kindler, S.; Soyke, A.; Wex, ol. 142, 499-509, 1998 assoon, a novel zinc-finger CAG/Glutamine-repeat protein selectively localized e number: Z22249; MUID:98345363; PMID:9679147 ion: may be involved in cytomatrix organization at the site of neurotransmitten mponent of the presynaptic cytoskeleton coiled coil; zinc finger ; 1-3938 <DIE> ferencee: UNIPROT:088778; UNIPARC:UPI00000E7EDE; EMBL:Y16563; NID:g3413503; PII ntal source: strain Sprague Dawley; brain preliminary; translated from GB/EMBL/DDBJ type: mRNA Indels 291; Length 3938; Gaps

र् 밁 ঠ 밁 र् 밁 र् 밁 र्

457

1468

397

354

1516

1666

1621

1576 487

밁 ঠ 밁 S . 문 ફ 밁

유

ঠ

밁 5 문 ঠ

247 1247

196

1302

306

```
A; Residues: 1-1748 <HAR>
A; Residues: 1-1748 <HAR>
A; Cross-references: UNIPROT:Q10172; UNIPARC:UPI0000169027; EMBL:Z69368; PIDN:CAA93290.1; A; Cross-references: UNIPROT:Q10172; UNIPARC:UPI0000169027; EMBL:Z69368; PIDN:CAA93290.1; B; McLean, J.; Harris, D.; Barrell, B.G.; Rajandream, M.A.; Walsh, S.V.; Wood, V. submitted to the EMBL Data Library, September 1997
A; Reference number: Z21790
A; Accession: T38380
A; Accession: T38380
A; Molecule type: DNA
A; Residues: 1457-1794 <MCL-
A; Cross-references: UNIPARC:UPI000016208D; EMBL:Z70691; PIDN:CAA94638.1; GSPDB:GN00066; A; Cross-references: UNIPARC:UPI000016208D; EMBL:Z70691; PIDN:CAA94638.1; GSPDB:GN00066; A; Experimental source: clone c25G10
C; Genetics: SPAC27F1.01c; SPDB:SPAC25G10.09c
A; Map position: 1
                                                                                                                                                                                                                                                                                                                                                                                                                 hypothetical divergent repeat-containing protein - fission yeast (Schizosack) (Schizosack) (Schizosaccharomyces pombe C.Date: 20-Oct-2000 #sequence_revision 20-Oct-2000 #text_change 09-Jul-2004 (Accession: T38459, T38380 R.Harris, D., McDonald, S.; Barrell, B.G.; Rajandream, M.A.; Walsh, S.V. submitted to the EMBL Data Library, February 1996 A.Reference number: Z21794 A.Accession: T38459
Query Match 4.7%; Score 168.5; D
Best Local Similarity 20.9%; Pred. No. 0.09;
Matches 123; Conservative 68; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ROATDHOELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQREEDHRREGLHVG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NSTGRLWSTSLDLGQGSDPNLDREPELEMESLTGSPEDRSRGEHSSTLPASTPSYTS---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GSFEYQDTLDHDYGGRASQPAADGTPAGLGATVYEEILQTSQSIARMRQASSRDLAF--T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AYE----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             --SPSLDSEAETLDGGPTRLYKSGSEYNLPAFMSLCSPTETPSGSSTTPSSGRPLKSAEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PGTPQLEFSAFGAFGKPSSLSTAEAK-----AATSPKATMSPRHLSESSGKPLSTKQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RASTPDWVSEGPQPGLRRALSSDSILSPAPDARAAD---PAPEVRKVNRIPPDAYQPYLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LR--EQEKWREVEQQRIRS-----TARKTRRDKEELRAQR------RRE----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTSPTSLSSLEEDSDSSPSRRQRLEEAKQQRKARHRSHGPLLPTIEDSSEEEELREEEEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VDDPGSLASVE----SPGTPKETPIEREIRLAQER-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QKASARPRPESSQESVALPKRRLPHNATTGYEELLSEEGPAEPTDGALQGGLRRFKTIGL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RGTPAGTTPGASQAPKAFNK---PHLA-----NGHVVPIKPQVKGVVRE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EDSSEGGLSPLPPQPPARADMTDEEFMRRQILEMSABEDNLBEDDTAVSGRGLAKHG--A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -----DPRTPGPPRSTPLEENVVDREQIDFLAARQQFLSLEQ----ANKG-APHSSPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YAGINPSDGINSEVLEAIRVTRH 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EDKKKEK--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PDENSDONSRSSSOASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGORKKEOW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SS----DLLERE---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRL-QKSQ 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FPTSTSSDSSGGRVIPDVRVTQH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ---DMMRKAELLQRQQGQAAGARGPH-----GGPSQPTGPRSQ 1219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ----QFLNAESAYMDPMKQNGGPLTPGTSPTQLAAPVS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PSNLSPIEDASPTEELRQAAEMEELHRSSCSEYSP---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -----RESVLRREQEVABERRNALFPEVFSFT
                                                  DB 2;
            213;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENKVR------AVPTWASVQV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         fission yeast (Schizosaccharomyces
            Indels
                                                  Length
                                                       1794;
            185;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EADLREORGL
            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                870
         27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         elastic titin - human (fragment)
(,Species: Homo sapiens (man)
(,Species: Homo sapiens (man)
(,Date: 29-May-1998 #sequence_revision 29-May-1998 #text_change 09-
(,Accession: I38346
(,Accession: I38346
(,Accession: 138346
(,Accession: 138346
(,Accession: 720, 293-296, 1995
A,Title: Titins: giant proteins in charge of muscle ultrastructure
A,Title: Titins: giant proteins in charge of muscle ultrastructure
A,Recence number: A57430; MUID:96026330; PMID:7569978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 5
I38346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      믕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ક
                                                                                                                                                                                                                                                                                                                                                                          A,Accession: 138346
A,Status: preliminary; translated
A,Molecule type: mRNA
A,Residues: 1-7962 <RES>
A,Cross-references: UNIPROT:Q10465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                        A; Cros
                                                    8
                                                                                                       밁
                                                                                                                                                S
                                                                                                                                                                                                                                                                                                              A;Gene: GDB:TTN
A;Cross-references:
              片
                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                     Query Match 4.7%;
Best Local Similarity 19.2%;
                                                                                                                                                                                                                                                                                                                                                              Genetics:
                                                                                                                                                                                                                                                                                           position:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1188 QTLNPPSVSTVQQSKPIESNTHTPEVKATSESPSASSNLEDRAARIKAEAQRRMNERLAA
              5801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      488
                                                                                                                                                                                                    121;
                                                                                                                                                70 VHAYTGQPSPRGLHSENREDEGWQVYRLGA-RDAHQGRPTWALRPEDGEDKEMKTYRLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ILSPAPDARAADPAPEVRKVNRIPPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTABAKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ----LGIKPROKGTPSPAPVNSATSTPVAAPTAQQIQPGKQASAVSSNVPAVSASISTP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QAVRKSSTVATLQGTPDHGDPRTP-----GPPRSTPLEENV-----VDREQIDFLAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SNHFNPFAKMQPPAPSPLQPSGHDSD-NWSQHGDEE-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       --APAPSSAPAPPAP----VSQLPPAV-----PNVPVPSMIPSVAQQPPSSVAPATAPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MSLEPPVRPAVPTSPKPQIPDSSNVHAPPPPVQPMNAMPSHNAVNARPSAPERRDSFGSV 1410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LREQRGLRQATDHQELVEIPTR-----PLLTKLSLITAPRRERGRPSLYVQRD-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -PAVVPTVQHPQPTKQIPTAA----VKDPSTTSTSFNTAPIPQQAPLENQF-----SK 1350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KPQVKGVVREENKVRAVPTWASVQVVDDPGSLA-SVESPGTPKETPIEREIRLAQEREAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RQQFLSLEQANKGAPHSSP---ARGTPAGT----TPGASQAPKAFNKPHLANGHVVPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APATNLGTSQSFSPRMGPVNNSG-----SPLAMNAAGQPSLA-VP----AVPSAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STLPPSQSSFAHVPSPAPPAPQHPSAAALSSAPADNSMPHRSSPYAPQEPVQKPQAINNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SSGSNVSSIEDETSTMPLKASQPTNPGAPSNHAPQVVPPAPMHAVAPVQPKAPGMVTN--
                                                         GDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTPLEENVVDR
                                                                                                         VEPYT-EPPEQPYYEE--PDEDYEEIKVEAKKEVHE---EWEEDFEEGQEYYEREEGYDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SKDAAALAAKLFGGMAPAHPVSTPPV---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SSQAS----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ----IVQETQREEDHRREGLHVGRAS--TPDWVSEGP----
                                                                                                                                                                                                                                                                                        :es: GDB:127867; ОМІМ:188840
2q31-2q31
                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                    UNIPROT:Q10465; UNIPARC:UPI000011010C; EMBL:X90569; NID:g1017426;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRS 588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -GITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAP 534
                                                                                                                                                                                                    81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         from
                                                                                                                                                                                                                          Score 167; DB 2;
Pred. No. 0.69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRHLSESS-----
                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                         GB/EMBL/DDBJ
                                                                                                                                                                                                       199;
                                                                                                                                                                                                                                                Length 7962;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   --GKPLSTKQEASKP-----
                                                                                                                                                                                                    Indels 228;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -RPQSAAPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QPGLRRALSSDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -EEDSEDDIRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and
                     EEAYQER
```

5800

128 30

	Db 502 LTTSTSYCGGDEADDEGKDSDSDTHTEAEAEETRADSDADTGTGL 546  Qy 83 HSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKEWKTYRLDAGDADPRRLCDLERE 142  Qy 143 RWAVIQGAVRKSSTVATLQGTPDHGD
A; Reference A; Accession A; Molecule A; Residues: A; Cross-ref A; Miki, Y.;	Query Match 4.6%; Score 166; DB 2; Length 1200; Best Local Similarity 20.0%; Pred. No. 0.077; Matches 137; Conservative 91; Mismatches 312; Indels 144; Gaps 29; Matches 137; Conservative 91; Mismatches 312; Indels 144; Gaps 29; Matches 137; Conservative 91; Mismatches 312; Indels 144; Gaps 29; Matches 137; Conservative 91; Mismatches 312; Indels 144; Gaps 29; Matches 137; Conservative 91; Mismatches 312; Indels 144; Gaps 29; Matches 137; Conservative 91; Mismatches 312; Indels 144; Gaps 29; Matches 137; Conservative 91; Mismatches 312; Indels 144; Gaps 29; Matches 137; Conservative 91; Mismatches 312; Indels 144; Gaps 29; Matches 137; Conservative 91; Mismatches 312; Indels 144; Gaps 29; Matches 137; Conservative 91; Mismatches 312; Indels 144; Gaps 29; Matches 137; Conservative 91; Mismatches 312; Indels 144; Gaps 29; Matches 137; Conservative 91; Mismatches 312; Indels 144; Gaps 29; Matches 137; Conservative 91; Mismatches 312; Indels 144; Gaps 29; Matches 137; Conservative 91; Mismatches 312; Indels 144; Gaps 29; Matches 137; Conservative 91; Mismatches 312; Indels 144; Gaps 29; Matches 137; Conservative 91; Mismatches 312; Indels 144; Gaps 29; Matches 137; Conservative 91; Mismatches 312; Indels 144; Gaps 29; Matches 137; Conservative 91; Mismatches 312; Indels 144; Gaps 29; Matches 137; Mismatches 144; Mismatches 14
A; Accession A; Molecule A; Residues: A; Cross-ref R; Joslyn, G arrington, G Cell 66, 60 A; Title: Id	C:UPI0000080BFB; GB one (NCBIP:113499) tein
C;Accession R;Kinzler, chul, S.F.; chul, S.F.; Science 253 Science Id A;Title: Id	R;Way, J.; Hellmich, M.R.; Jaffe, H.; Szaro, B.; Pant, H.C.; Gainer, H.; Battey, J. Proc. Natl. Acad. Sci. U.S.A. 89, 6963-6967, 1992 A;Title: A high-molecular-weight squid neurofilament protein contains a lamin-like rod dA;Reference number: A46194; MUID:92357751; PMID:1379729 A;Accession: A46194 A;Status: nucleic acid sequence not shown; not compared with conceptual translation
RESULT 7 RBHUAP adenomatous N;Alternate C;Species: C;Date: 31-	splice fo
Db 10	Cy 650 EVLEATK/TKHKKAMAEKWESKITASEED 678  Db 6142 AVPQRVEVTRHEVSAEEEWSYSEEEE 6167
u	6106AVPVPVAKK
Qy 5	Qy 598 SYSVSESPFFSDIHLHSNVAWTVEDPV-DSAPPGORKKEQWYAGINPSDGINS 649
) VY 9	538 LQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITG      :
Qy 4 Db 9	Qy 478 LSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRPRAPDEPQQAQVPHVWGWEVAGAPALR 537
Qy 4 0b 8	QY 420 IPPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKP 477
Db 8	Qy
Db 7	5904 KMVISEEKMFFASHTEEEVSVTVPE
ργ : 2 :	303 READLREORGLROATDHOELVEIPTRPLLTKLSLITAPRRERGRPSLYVORDIVOETORE
Qy 2	QY . 249 PQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLAQE 302   :  :           ::    5856 KTSRRWEERKVVVTKVPR-VSKKIVPOKPSRTPVOERVIEVKVPAVHTK 5903
Db 6	
Ov 1	OV 189 ROTDRIJAROORISI.ROANKGADHSSDARGTDAGTTDGASOADXAFNKDHIJANGHVVDIK 248

```
921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 344
                                                                              613 HSNVAWTVEDPVDSAPPGQRKKEQ 636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     861 PSEKVDDESSARSPTHSDRSESOKSARSPMTSDHIKSPIDFEKAESEKSALSYKSSDHDK 920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               291 --TPIEREI----RLAQEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRE 343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                758 ALSPVLSEMSVHSTAMSHTSRSPTASEKSVKSPT-HSERTASPT----AKSPIIMEPAKS 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181 LEENVVDREQIDFLAARQQFLSLEQANKGAPHS----SPARGTPA-----GTTPGASQAP
-----ASEPAKŚPIPSEKAESE 1111
                                                                                                                                                                                                                                    EERRNALFP----EVFSPTPDENSDQNSRSSSQA-----SGITGSYSVSESPFFSPIHL 612
                                                                                                                                                                                                                                                                                                                  SEKAESEKSARSPVPSEKAESEKSARSPVPSEKDESEKSAKSPTSDQARSPV---PSEKA 1036
                                                                                                                                                                                                                                                                                                                                                                                                 FRAPDEPQQAQVP----HVWGWEVAGAPAL----RLQKSQSSDLLERERESVLRREQEVA 562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STAEAKAATSPKATMSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLR 510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ---PK-----DESEKELSPERSESVMSGKSQITSSSAKSPVPS-EKADSEKSATSPT 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RGRPSLYVQRDIVQETQRE-EDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPA 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AERMTSPIGSGS----EKSAKSPVRSE-----ATKSPVSEKSAGSKSKSP-VPSER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KAFNKPHLANGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKE-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FQSDKVTSPVL----LERAMSLQCAPTEKPLSDTIKSPVVSEPAISPVSSVRSGAETSP
                                                                                                                                                             ESEKSARSPVTSEHVKSPVPSEKSESEKSARSPVTSEHVKSPVPSEKAESEKSAKSPV--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SPVPSEKAESEKSARSPVP-SEKAESEKSARSPVTSEPAKSPVPSEKAAESEKSARSPVP 979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PDARAADPA-----PEVRKVNRIP--PDAYQPYLSPGTPQLEFSAFGAFGKPSSL 450
                                                                                                                                                                 1094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           711
```

us polyposis coli protein - human

te names: polyposis coli locus protein DP2.5; tumor suppressor APC

Homo sapiens (man)

1-Dec-1991 #sequence revision 31-Dec-1991 #text\_change 09-Ju1-2004

on: A37261; B39658; A44928; A49319; I54271

K.W.; Nilbert, M.C.; Su, L.K.; Vogelstein, B.; Bryan, T.M.; Levy, D.B.; Smith, Horii, A.; Ando, H.; Miyoshi, Y.; Miki, Y.; Nishisho, I.; Nakamura, Y.

33, 661-665, 1991

Identification of FAP locus genes from chromosome 5q21.

ce number: A37261; MUID:91335210; PMID:1651562

on: A37261

501-613, 1991 Identification of deletion mutations and three new genes at the familial polypos ce number: A39658; MUID:91330307; PMID:1678319 on: B39658 type: mRNA
il-2843 <KIN>
il-2843 <KIN>
ferences: UNIPROT:P25054; UNIPARC:UPI00000502E5; GB:M74088; NID:g182396; PIDN:l
g.; Carlson, M.; Thliveris, A.; Albertsen, H.; Gelbert, L.; Samowitz, W.; Grodt
G.; Carlson, J.; Wasmuth, J.; Le Paslier, D.; Abderrahim, H.; Cohen, D.; Let
, J.; McPherson, J.; Wasmuth, J.; Le Paslier, D.; Abderrahim, H.; Cohen, D.; Let

s type: DNA
s: 1-183,'L',185-969,'N',971-1308,'G',1310-1324,'SS',1326,'HSTLE',1332-1354,'P',
sferences: UNIPARC:UPI000016AEE0; GB:M73548; NID:g190163; PIDN:AAA60354.l; PID:g
; Nishisho, I.; Horil, A.; Miyoshi, Y.; Utsunomiya, J.; Kinzler, K.W.; Vogelste
; S2, 643-645, 1992

Disruption of the APC gene by a retrotransposal insertion of L1 sequence in a cose number: A44928; MUID:92119623; PMID:1310068

type: DNA: 1506-1525 <MIK>

sferences: UNIPARC:UPI000003546E; GB:S78214; NID:g243541; PIDN:AAB21145.1; PID:gence extracted from NCBI backbone (NCBIN:78214, NCBIP:78218)
L.; Olschwang, S.; Groden, J.; Robertson, M.; Samowitz, W.; Joslyn, G.; Gelber

```
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R;Lambertz, S.; Ballhausen, W.G.

Hum. Genet. 90, 650-652, 1993

A;Title: Identification of an alternative 5' untranslated A;Reference number: I54271; MUID:93186137; PMID:8383094

A;Accession: I54271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cell 75, 951-957, 1993
A;Title: Alleles of the APC
A;Reference number: A49319;
A;Accession: A49319
                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ∙ ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         F;1558-1577/Region: acidic F;1866-1893/Region: highly charged
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             F,1131-1156/Region: acidic F,1558-1577/Region: acidic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A_i,Map position: 5q21-5q22
A_i,Note: mutations of this gene can result in familial adenomatous polyposis or sporadic
                                                                                                                         g
                                                                                                                                                               ঠ
                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: mRNA
A; Residues: 1-4 <LAM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: UNIPARC:UPI00000716F9; GB:S67787; NID:g461061; PIDN:AAD13997.1; PID
S
                                            밁
                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: UNIPARC:UPI000011EA68; GB:S56365; NID:g266243; PIDN:AAD14918.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;Gene: GDB:APC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;Molecule type: mRNA
;Residues: 'G',143-171,'P',173-179 <SPI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;7-72/Region: coil #status predicted
;185-227/Region: coil #status predicted
;731-2832/Domain: serine-rich <CTD>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               superfamily: adenomatous polyposis coli protein 
Keywords: cancer; familial adenomatous polyposis; tumor suppressor 
1-730/Domain: leucine-rich <NTD>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cross-references: GDB:119682; OMIM:175100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                    2377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2088
                                                                                                                                2478
                                                                                                                                                                                                                2428
                                                                                                                                                                                                                                                                                                                                                                                        2326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2206
    539
                                                                                                                                                                        422
                                                                                                                                                                                                                                                        363
                                                                                                                                                                                                                                                                                                                                            303
                                                                                                                                                                                                                                                                                                                                                                                                                              243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       138;
                                                                                      482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             78
    Q-KSQSSDLLERERESVLRREQEVAEERRNALFPE-
                                                                                                                                                                                                                                                                                                                                          READLREORGIROATDHOELVEIPTRPLLTKLSLITAPRRERGRPSLYVORDIVQETQRE
                                                                                                                                                                                                                                                                                                                                                                                        R-NSISPGRNG-ISPPNKLSQLPRTSS----PSTASTKSSGSGKMSYTSPGRQMSQQ
                                                                                                                                                                                                                                                                                                                                                                                                                              HVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLAQE 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATTSPRGAKPSVKSELSPVARQTSQIGGSSKAPSRSGSRDSTPSRPAQQPLSRPIQSPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NSEISGOMKOPLOANMPSISRGRTMIHIPGVRNSSSSTSPVSKKGPPLKTPASKSPSEGO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SPFHLTPDQEEKPFTSNKGPRILKPGEKSTLETKKIESESKGIKGGKKVYKSLITGKVRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DPRRLC-DLERERWAVIQGQAVRKSSTVATLQGTPDHGDPR-----TPGPPRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEHGL-SPDSENFDWKAIQEGANSIVSSLHQAAAAACLSRQASSDSD-SILSLKSGISLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SPRGLHSENREDEGWQVYRLGAR----DAHQGRPTWALRPEDGEDKEMKTYRLDAGDA--
                                                                                                                                                                      PDAYOPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLSTK
                                                                                                                                                                                                                                                        EDHRREGLHVGRASTPDWVSEGPOPGLRRAL-SSDSILSPAPDARAADPAPEVRKVNRIP
                                                                                                                                                                                                                                                                                                  ---NLTKOTGLSKNAS----SIPRSESASK-GLNOMNIGNGANKKVELSRMSSTKSSGS
                                              DIARSHSESPSRLPINRSGTWKREHSK-
                                                                                    QEA---SKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRL
                                                                                                                              -QAQTPVLSPSLPDMSLSTH---
                                                                                                                                                                                                                ESDRSERPVLVRQST--FIKEAPSPTLRRKLEESASFESLSPSSRPASPTRS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.6%; Score 166; DB 1; I 21.1%; Pred. No. 0.22; tive 82; Mismatches 272;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene: an attenuated form of familial polyposis. MUID:94073973; PMID:8252630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ----GASQAP------KAFNKPHLANG 242
                                                                                                                                -SSVQAGGWRKLPPNLSPT-IEYNDGRPAKRH 2526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 2843;
                                              -HSSSLPRVSTWRRTGSSSSIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
    --VFSPTPDENSDQNSRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         162;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              얁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              adenomatous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               178
                                                                                                                                                                                                                                                                                                      2427
                                                                                                                                                                                                                                                                                                                                                                                        2376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2145
    588
                                              2574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              β
```

```
R;Ishikawa, K.; Nagase, T.; Suyama, M.; Miyajima, N.; Tanaka, A.; Kotani, H. DNA Res. 5, 169-176, 1998
A;Title: Prediction of the coding sequences of unidentified human genes. X. A;Reference number: Z14142; MUID:98403880; PMID:9734811
A;Accession: T00365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hypothetical protein KIAA0670 - human (fragment) C;Species: Homo sapiens (man) C;Date: 01-Feb-1999 #sequence_revision 01-Feb-19 C;Accession: T00365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
T00365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Status: preliminary; translated A;Molecule type: mRNA A;Residues: 1-1280 <ISH>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                밁
                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Note: KIAA0670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Cross-references: UNIPARC:UPI000017C1BF; A;Experimental source: brain; clone HK02359
                                                                                 S
                                                                                                                                                  S
                                                                                                                                                                                   맑
                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 145;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2575
                                                                                                                                                                                                                                                                                                                           465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 356
                   569
                                                                                                                    819
                                                                                                                                                     483
                                                                                                                                                                                       567
                                                                                                                                                                                                                       437
                                                                                                                                                                                                                                                                                          382
                                                                                                                                                                                                                                                                                                                                                             324
                                                                                                                                                                                                                                                                                                                                                                                              411
                                                                                                                                                                                                                                                                                                                                                                                                                                271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       44 GQDEPQTWP---TDHRAQQGVQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGAR 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LFPEVFSPTPDENS---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QTVSSGATNGAESKTLIYQMAPAVSKTEDVWVRIEDCPINNPRSGRSPTGNTPP
                                                                                                                                                                                                                                                                                                                                                         EIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQREED-HRREGLHVGRASTPDW-V 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DAHQGRPTWALRPEDGEDKEMKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVAT 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SSQASGIT-GSYSVSESPFFSPIHLHSNVAWT-VED--
                                                                                                                                                                                                                                                                                                                           ---AQPLPLKIE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                QVVDDPGSLASVESPGTPK-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PLLTKEASSPP-----PHPQLHSEEEIEPMEGPAPPVLIQLSPPNTDADTRELLVSQHTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGTTPGASQAPKAFNKPH------LANGHVVPIKPQVKGVVREENKVRAVPTWASV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOGTPDHGDPRTPGPPRSTPLEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KSHLAR-----QQQEKEMKT-----TSPLEEEEREIKSSQGLKEKS----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GEEI PRVKPEEMMDERPKTRSQEQEV---
                                                   KCEAEEAEPP--
                                                                                                                    EVATPP--VPQLQVCEPKERTSTSSSSVQARRLSQPESAEKHVTQ----RLQPER-GSPK
                                                                                                                                                     EASKPPRGCPQ-----
                                                                                                                                                                                                                                                                                          SEGPOPGLRRALSSDS----ILSPAPDARAADPAPEVRKVNRIPPDAYOPYLSP-GTPQL 436
                                                                                                                                                                                                                                                                                                                                                                                              QLV---GGLSPLSSPSDTKAESPAEKVPEESVLPLVQKSTLADYSAQKDLEPESDRS---
                                                                                  --EPQQAQVPHVWGWEVAGAPALRLQKSQSSDLLERER--ESVLRREQ---EVAEERRNA 568
                                                                                                                                                                                       ----- MGSRSTSESRSRSRSRSRSRSRSRKSLSPGVSRDSSTSYTETKDPSSGQ
                                                                                                                                                                                                                   EFSAFGAFGKPSSLSTAEAK-----AATSPKATMSPRHLSESSGKPLSTK-----Q
                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          92;
                                                   AATQPQTSETQTSHLPESERIHHTVEEKEEVTMDTSENRPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 164.5; D
Pred. No. 0.1;
92; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                from
                                                                                                                                                                                                                                                                                                                           -ELALAKGITEECLKOPSLEQKEGRRASHTLLPSHRL
               -DONSRSSSOASGITGSYSVSESPFFSPIHLHSNVAW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-Feb-1999 #text_change 21-Jul-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                -ETPIEREIRLAGERE-ADLREGRGLROATDHQELV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DRKKASLVALPEQTASEEET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL: AB014570; NID: g3327153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----LERGGRFTRSQEE------AR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240;
                                                                                                                                                       -ANRGVVRWEYFRLRPLRFRAPD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels 225;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PVDSAPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A.; Kotani, H.; Nomura,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ----PP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -NSTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PIDN:BAA31645.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2627
                      618
                                                        722
                                                                                                                                                         515
                                                                                                                                                                                           617
                                                                                                                                                                                                                                                            566
                                                                                                                                                                                                                                                                                                                               509
                                                                                                                                                                                                                                                                                                                                                                                                  464
                                                                                                                                                                                                                                                                                                                                                                                                                                   323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            287
                                                                                                                                                                                                                          482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The complete
```

ð

밁

밁

```
A;Residues: 1-789,'PGGHTG' <DO3>
A;Cross-references: UNIPARC:UPI0000027DDD; EMBL:AF033276; NID:g2852700; PID:g2852701
A;Note: binds the regulatory subunits (RII) of protein kinase AII isoforms
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-789,'PGGHTG' <DO3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Dong, F.; Feldmesser, M.; Casadevall, A.; Rubin, C.S. J. Biol. Chem. 273, 6533-6541, 1998
A;Tille: Molecular characterization of a cDNA that encodes A;Reference number: Z16620; MUID:98165844; PMID:9497389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A kinase anchor protein AKAP-KL isoform 1 - mouse C;Species: Mus musculus (house mouse) C;Species: Mus musculus (house mouse) C;Date: 11-Jun-1999 #sequence revision 11-Jun-1999 #text_change C;Accession: T09225; T09226; T09227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Gene: AKAP-KL C;Keywords: alternative splicing; kidney; lung; signal transduction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: UNIPARC:UPI000002A38B; EMBL:AF033275; NID:g2852698; PID:g2852699
A;Note: binds the regulatory subunits (RII) of protein kinase AII isoforms
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: mRNA
A; Residues: 1-848,862-885 < DO2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Accession: T09226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: UNIPROT:054931; UNIPARC:UPI0000028356; EMBL:AF033274; NID:g2852696; A;Note: binds the regulatory subunits (RII) of protein kinase AII isoforms
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: mRNA
A; Residues: 1-885 < DON>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Accession: T09225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                          377
                                                                      446 GPLSKLWAEDGEFTSARAVLTVVKDEDHGILDQFSRSVNVSLTQEELDSGLDELSVRSQD
                                                                                                                                                                                                                                                             339
                                                                                                                                                                                                                                                                                                                                                          280
                                                                                                                                                                                                                                                                                                                                                                                                      188
                                                                                                                                                                                                                                                                                                                                                                                                                                                    230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      157;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            h 4.5%;
Similarity 19.1%;
TPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRIPPDAYQPYLSPGTPQL
                                                                                                                                                                                                                                                           TEQIDFSAARKQFQLMENSRQTLAKGQSTPRLFSIKPYYKPLGSIHSDKPPTILRPATVG
                                                                                                                                                                                                                                                                                                                                                        LQQQQQQLQQQQLQQQQLQQQQLQQQLQQQQLSTSQPC-TAPAAHKHLDGIEHTKEDVV
                                                                                                                                                                                                                                                                                                                                                                                                      ----REQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGA------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GPEASGWGQDEPQTWPTDHRAQQGVQRQGVSYSVHAYTGQPSPRGLHSENREDEGW----
                                                                                                                                                                                                             QVVDDPGSLASVESPGTPKETPIEREIRLAQEREADLREQRGLRQATDHQE--LVBIPTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AVRKSSTVATLOGTPDHGDPRTPGPPRSTPLEENVVD------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KKEAKFELRAFHEDKKPSKLFEEDEREKEQFCVR----KVRPSEEMIELEKERRELIRSQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GERANGHSTDQPQDL----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGNSDTEGGOPG--RKRRWGASTATTOKKPSISITTESLKSL
                                                                                                                                                                                                                                                                                                         ----SQAPKAF-----NKPHLANGHVVP----IKPQVK--GVVREENKVRAVPTWASV
                                                                                                                                                                                                                                                                                                                                                                                                                                                       AVKKNPGIAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -QVYRLGARDAHQGRPTWALRPEDGEDKEMKTYRLDAGDADP-RRLCDLERERWAVIQGQ 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TVEDPVDSAPPGQRKKEQWYAGI ---- NPSDGINSEVLEAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DVPEPPMPIADQVSNDDRPEGSVEDEEKKESSLPKSFKRKISVVSATKGVP------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      110;
                                                                                                                                                                 --QKAPCVSESQSAGAGPAN-----AATQGKEGPYSEPSKR
                                                                                                                  SLITAPRRE-RGRPSLYVQRDIVQETQREEDHRREGLHVGRAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 162; DB 2
Pred. No. 0.089;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  KWWNPPQEKTIEEQLDEEHLESHRRYKERKEKRAQQEQLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----LGNSLQAPASPSSSTSSHCSSRDGEFTLTTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      286; Indels 268;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 885;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          X 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          isoforms
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of a novel
                                                                                                                                                                                                                                                                                                         270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         173
                        436
                                                                      505
                                                                                                                                                                   445
                                                                                                                                                                                                                                                           398
                                                                                                                                                                                                                                                                                                                                                                                                                                                    279
                                                                                                                                                                                                                                                                                                                                                                                                      227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          muri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Map position: 12
C;Superfamily: acute lymphoblastic leukemia protein,
C;Keywords: alternative splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Species: Homo sapiens (man)
C;Date: 24-Mar-1999 #sequence_revision 24-Mar-1999 #text_change 09-Jul-2004
C;Accession: T03455
R;Prasad, R.; Zhadanov, A.B.; Sedkov, Y.; Bullrich, F.; Druck, T.; Rallapal
Oncogene 15, 549-560, 1997
A;Tile: Structure and expression pattern of human ALR, a novel gene with spiriters for number: Z14954; MUID:97388474; PMID:9247308
S
                                           밁
                                                                                     Ś
                                                                                                                                        밁
                                                                                                                                                                                  S
                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                          멹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: mRNA
A; Residues: 1-4957 < PRA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Gene: ALR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: UNIPROT:O14686; UNIPARC:UPI00001100F1; EMBL:AF010404; NID:g2358286;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Status: preliminary; translated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Accession: T03455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                       1240
                                                                                                                                                                                                                                                                                                                                  1193
                                                                                                                                           1294
                                                                                                                                                                                                                                                                                                                                                                                                                            1133 GPAAQAEVLSGDGOPDEVIPADLPAEGAVEOSLAEGDEKKKQORRGRKRSKLEGMFPAYL 1192
                                                                                                                                                                                       184 NVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLANGH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4.4%; al Similarity 21.4%; 162; Conservative 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          37
                                                                                                                                           D-LDRISTEEL-PKMESKDLQQLFKDVLGSEREQHLGCG-TPGLEGSRTPLQRPFLQGG-
                                                                                                                                                                                                                                                                                                                                                                              VHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWAL-RPE---DG--EDKEMKT 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GPEA----SGWGQ-DE--PQTWPTDHRAQQGV-----QRQG-----VSYS
  PIEREIRLAQEREAD -- LREQRGLRQATDHQELVEIPT-RPLLTKLSLITAPRRERGRP-
                                                                                            VVPIKPQVKGVVREENKVRAVPTWASVQVVD----
                                                                                                                                                                                                                                       SQ--KGDDGP----DIADEESRGLEGKADTPGPEDGGVKASPVPSDPEKPGTPGEGMLSS 1293
                                                                                                                                                                                                                                                                                   YRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTPLEE
                                                                                                                                                                                                                                                                                                                                    QEAFFG----KELLDLSRK----ALFAVGV-----GRPSFGLGTPKAKGDGGSERKELPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LRIQKSQSSDLLERERESVLRREQEVAEER-----RNALFPEV------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LREKGPSQPPTAAQPSGPVNMEETRPEGGYFSKYSEAAELRSTASLLATQESDVMVGPFK 730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AHTSKEGSEQQEPEATVEEAGSQTPGSEKPQGMFAPPQVSSPVQEKRDILPKNLPAEDRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TT---
                                                -LPL----GNLPSSSPMDSYPGLCQSPFLDSRERGGFFSPEPGEPDSPWTGSGGTTPST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ETHKSKRRERMDDSSYTSKLLSCKVTSEVLEATRVNRRKSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DSAPPGORKK---EOWYAGINPSDGINSEVLEAIRVTRHKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GKIEKVKPPPSPTTEGPSLQPDLAPEEAAG-----TQRP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----FSPTPDENSDONSRSSSOASGITGSYSVSESPFFSPIHLHSNVAWTVEDPV.624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LRSRKORTLSMIEEEIRAAQEREEELKROROVROSTPSPRAKNA--PSLPSRTTCYKTAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LRFRAPDEPQQAQVPH-----VWGW-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RHLSESSG---KPLSTKQEA-----SKPPRGC---PQANRGVVRWEYF-----RLRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNPSEGREGVSKSFSDHGFYSPSSTLGDSPSVDDPLEYQAGLLVQNAIQQAIAEQVDKAE 610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -----VLETLSNDFSMDNISDSGASNETTSALQENSL-----ADFSLPQTPQT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 159; DB
Pred. No. 1.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241;
                                                                                            -----DPGSLAS--VESPGTPKET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 4957;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ALR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -----KAATSPKATMSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ----EVAGAPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         272;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             T.; Rallapalli,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    - KNLMQTLMEDY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene with strong homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                    1239
                                                1403
                                                                                               291
                                                                                                                                             1349
                                                                                                                                                                                         243
                                                                                                                                                                                                                                                                                      183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R.; Yano,
```

밁 S 밁 S 밁 S В S

S 밁 Ş 5

밁 S

밁

S

C;Accession: T03454
463 ATMSPRHLSESSGKPLGTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDE 516  :
431SSLSTABAKAATSPK 462 628 QPPMLGASSRPGAGQPGEFFHTTPPGTFRHQPSTPDPFLKPRCPSLDNLAVPESPGVGGGK 168 628 ATMSPRHLSESSGKPLSTKQBASKPPRGCPANRGVVRWEYFFLRPLRFRAPDE 516 463 ATMSPRHLSESSGKPLSTKQBASKPPRGCPANRGVVRWEYFFLRPLRFRAPDE 516 688 ASEPLLSPPPFGESR-KALEVKKEELGASSPSYGPPNLGFV
401PAPD
QREEDHRR
WSSRCKQIMKLWRKVPAADKAPYLQKAKDNRAAHRINKVQKQAESQINKQTKVGDIARKT 151  OREEDHRR

```
밁
                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                     뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                   밁
                                                                                                ঠ
                                                                                                                                    밁
                                                                                                                                                                     S
                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                             á
                                                                                                                                                                                                                                                                                                                                                                                                                     1763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1655
                                                                                                                                      1993
                                                                                                                                                                                                                                                                               1873
                                                                                                                                                                                                                                                                                                                                                1823 DRPALHLRIPPQPGALGSPPPAAAPTIFIGSPTTPAGLS-----TSADGFLKPPA 1872
2093
                                                                   2035
                                                                                                                                                                                                         1933
                                573
                                                                                                    517
                                                                                                                                                                       463
                                                                                                                                                                                                                                            431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            244 VVPIKPQVKGVVREENKVRAVPTWASVQVVD------DPGSLAS--VESPGTPKET
                                                                                                                                                                                                                                                                                                                 401 ---PAPD-----
                                                                                                                                                                                                        QPPMLGASSRPGAGQPGEFHTTPPGTPRHQPSTPDPFLKPRCPSLDNLAVPESPGVGGGK 1992
                                                                                                                                                                                                                                                                                                                                                                                                                     WSSRCKQIMKLWRKVPAADKAPYLQKAKDNRAAHRINKVQKQAESQINKQTKVGDIARKT 1822
                                                                                                                                                                                                                                                                             GSVPGPDSPGELFLKLPPQVPAQAPSQDPFGLAPAYPLEPRFPTAPPTYPPYPSPTGAPA 1932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIEREIRLAQEREAD--LREQRGLRQATDHQELVEIPT-RPLLTKLSLITAPRRERGRP- 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -LPL----GNLPSSSPMDSYPGLCQSPFLDSRERGGFFSPEPGEPDSPWTGSGGTTPST
                              VFSPTPDENSDQNSRSSSQASGITGSYSVSESPFFSP 609
                                                                                                PQQAQVPHVWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNA----LFPE 572
                                                                                                                                      ASEPLLSPPPFGESR-KALEVKKEELGASSPSYGPP--NLGFV-
                                                                                                                                                                     AT---MSPRHLSESSGKPLSTKQE---ASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDE 516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PTTP----TTEGEGDGLSYNORSLORWEKDEELGQLSTISPVL--YANINFPNLKQDYPD 1762
                                                                   PSSG--THLGGLELKTPDVFKAPLTPRASQVEPQSPGLGLRPQEPPPAQALAPSPPSHPD
                                                                                                                                                                                                                                                                                                                                                                                                                                                           --SLYVQR----
                                                                                                                                                                                                                                                                                                                 ----ARAADP---APEVRKVNRIP--PDAYQPYLS-----
                                                                                                                                                                                                                                                                                                                                                                                    --EGLHVGRASTPDWVSEGPQPGLRRALSSDSILS--- 400
                                                                                                                                                                                                                                          PGTPQLEFSAFGAFGKP----SSLSTAEAKAATSPK 462
 -GSYT---DPYAQP 2106
                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----DIVQET 359
                                                                                                                                            -DS 2034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1708
                                                                        2092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       291
                                                                                                                                                                                                                                                                                                                       430
```

R;Kaneko, T.; Nakamura, Y.; Wolk, C.P.; Kuritz, T.; Sasamoto, S.; Watanabe, A.; Iriguchi Nakazaki, N.; Shimpo, S.; Sugimoto, M.; Takazawa, M.; Yamada, M.; Yasuda, M.; Tabata, S DNA Res. 8, 205-213, 2001 translation initiation factor IF-2 [imported] - Nostoc sp. (strain PCC 7120)
C;Species: Nostoc sp. PCC 7120
A;Note: Nostoc sp. strain PCC 7120 is a synonym of Anabaena sp. strain PCC 7120
C;Date: 14-Dec-2001 #sequence\_revision 14-Dec-2001 #text\_change 09-Jul-2004
C;Accession: A12284 A;Title: Complete Genomic Sequence of the Filamentous Nitrogen-fixing Cyanobacterium Ana A;Reference number: AB1807; MUID:21595285; PMID:11759840 A;Accession: A12284 S A;Molecule type: DNA A;Residues: 1-1039 <KUR> A;Cross-references: UNIPROT:Q8YQJ1; UNIPARC:UPI00000CE912; GB:BA000019; PIDN:BAB75531.1, A;Experimental source: strain PCC 7120 Ś 밁 밁 Ś A;Gene: infB C;Superfamily: translation initiation factor IF-2; translation elongation factor Tu C; Genetics: A; Status: preliminary Query Match 4.4%; Score 158; DB 2; Length 1039; Best Local Similarity 20.3%; Pred. No. 0.18; Matches 107; Conservative 59; Mismatches 180; Indels 18 142 ERWAVIQGOAVRKSSTVATLQGTPDHGDPRTPGPPRSTPLEENVVDREQIDFLAARQQFL 256 REENKVRAVPTWASVQVVDDPGSLASVESPGTPKETP---IEREIRLAQER-EADLREQR 311 S-----LEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLANGHVVPIKPQVKGVV EIRKPKILRNTTSNAPEASVANNQIASSEANSPAPPRPFATP----EKLAATNGTSKKELNATSHKPNSAPAGSRNRPAPPQK-------QQQIL -VSPMKPTAPS--Gaps 146 94 201

Query Match Best Local Similarity 21.7%; Pred. No. 0.44; Best Local Similarity 21.7%; Pred. No. 0.44; Matches 118; Conservative 66; Mismatches 186; Indels 173; Gaps 22; Matches 118; Conservative 66; Mismatches Indels 173; Gaps 22;  Qy 170 PRTPGPPRSTPLEENVVDREQIDFLAARQOFLSLEQANKGAPHSS-PARGTPAGTTPG-226	T02345  T02345  hypothetical protein KIAA0324 - human (fragment) C;Species: Homo sapiens (man) C;Date: 05-Mar-1999 #sequence_revision 05-Mar-1999 #text_change 09-Jul-2004 C;Accession: T0345 R;Ricke, D.O.; Bruce, D.; Mundt, M.; Doggett, N.; Munk, C.; Saunders, E.; Robinson, D.; re, J.; White, S; Ueng, S.; Tatum, O.; Campbell, C.; Fawcett, J.; Deaven, L. submitted to the EMBL Data Library, March 1998 A;Description: Sequencing of human chromosome 16pl3.3. A;Reference number: Z14664 A;Accession: T02345 A;Residues preliminary; translated from GB/EMBL/DDBJ A;Molecule type: DNA A;Residues: 1-1791 cRIC> A;Cross-references: UNIPROT:O60382; UNIPARC:UPI00000730AE; EMBL:ACC004493; NID:g2996648; C;Genetics: A;Map position: 16 A;Introns: 1610/2; 1706/2	Db 147RPVPRNLSTTPQKPAAPEAGSQAPAKIAVEKERKSAQPRP 190  312 GLRQATDHQELVEIPTR PLITKLSLTTAPRRERGRESIYVQRDIVQETQREED 364
91 128 653 168 704 178 213 824 884	R;Schiaffino, M.V.; Bassi, M.T.; Rugarli, E.I.; Renieri, A.; Galli, L.; Ballabio, A. Hum. Mol. Genet. 4, 373-382, 1995 A;Title: Cloning of a human homologue of the Xenopus laevis APX gene from the ocular alb: A;Reference number: 137183; MUID:95315933; PMID:7795590 A;Recession: 137183 A;Status: preliminary; translated from GB/EMBL/DDBJ A;Molecule type: mRNA A;Residues: 1-1616 <res> A;Cross-references: UNIPROT:Q13796; UNIPARC:UPI0000125D05; EMBL:X83543; NID:g790999; PID: C;Genetics: A;Cross-references: GDB:582527 A;Gane: GDB:APXL A;Cross-references: GDB:582527 A;Map position: Xp22.3-Xp22.3 F;32-104/Domain: GLGF domain homology <glg> Query Match Best Local Similarity 20.8%; Pred. No. 0.41; Matches 156; Conservative 68; Mismatches 248; Indels 278; Gaps 39; Matches 156; Conservative 68; Mismatches 248; Indels 278; Gaps 39;  Qy 37 GBEASGWGQDEPQTWPTDHRAQQGVQRQGVSYSVHAYTGQPSPR 80  </glg></res>	Db 697 SRTARRGSRSSPEPKTKSRTPPRRSSRSPELTRKARLSRRSASSPETRSRTP 753  Qy 461 PKATMSP

R 217	Qy 161 LQGTPDHGDPRTPGPPRSTPLEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPAR	
T 160	Qy 110 ALRPEDGEDKEMKTYRLDAGDADPRRICDLERERWAV-IQGQAVRKSSTVAT	
W 109 Q 1484	Qy 87 REDEGWQVYRLGARDAHQGRPTW	
	Qy 38 PEASGWGQDEPQTWPTD-HRAQQGVQRQGVSYSVHAYTGQPSPRGLHSEN	
33;	Query Match 4.4%; Score 156; DB 2; Length 2774; Best Local Similarity 20.7%; Pred. No. 0.8; Matches 151; Conservative 75; Mismatches 256; Indels 246; Gaps	
764,'D',766,'LR	A; Status: preliminary A; Molecule type: mRNA A; Molecule type: mRNA A; Residues: 73-364, 'NRLRS', 370, 'QKN', 374, 'PSPKGL', 381-751, 'RSMMSQMNAQRR', 764, 'D', 76 A; Residues: 73-364, 'NRLRS', 370, 'QKN', 855, 'LPHRWLRTN', 865, 'W', 867, 'HSQLPDGGD', 877, 'Q', 'WLKRNMCPQPRQSP', 851, 'V', 853, 'NSL', 855, 'LPHRWLRTN', 865, 'W', 867, 'HSQLPDGGD', 877, 'Q', A; Cross-references: UNIPARC: UPI000017752D; EMBL:X66840 A; Experimental source: strain Sprague Dawley C; Superfamily: microtubule-associated protein MAPIB C; Keywords: microtubule binding; phosphoprotein	
	submitted to the EMBL Data Library, June 1992 A;Reference number: S22108 A;Accession: S22108	~ ~ ~ .
:g205537; PIDN:	A;Molecule type: mxNA A;Residues: 1-2774 <lan> A;Cross-references: UNIPROT:P34926; UNIPARC:UPI000012EBC2; GB:M83196; NID:g20 A;Note: sequence extracted from NCBI backbone (NCBIN:111039, NCBIP:111040) R;CrayChik A.</lan>	
in one messeng	,Title: Microtubule-associated proteins 1A and LC2. Two proteins encoded ,Reference number: A43359; MUID:92355629; PMID:1379599 ,Accession: A43359	~~~~
	C;ACCEBBION: A43559; SZZIV6 R;Langkopf, A.; Hammarback, J.A.; Muller, R.; Vallee, R.B.; Garner, C.C.	
	RESULT 15 A43359 microtubule-associated protein MAPIA - rat C;Species: Rattus norvegicus (Norway rat) C;Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 09-Jul-2004	~~~
	ESRQ	-
,	Qy 550 ERESVLRREQEVASERRNAL 569	_
R 549	Qy 490 GCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQKSQSSDLLER	п С
- 1154	OY 435 QLEFSARGAFGKPSSISTAEAKAATSFKATTSFKHLSESSGKFLSTKLEASKFFK	п О
	1042 HARG	
	Oy 391 RALSSDSILSPAPDARAADPAPEVRKVNRIPPDAYQPYLSPGTP	0
	Db 998 CRGAPELPREGRGRAGTLPRDYRYSEESTPADLGPRAQSPGSPL	
997	942DPG	) H
	280 ASVE	0

	-AAGCNTS 1978	1972	9
	WYAGINES 644	637	Ş
KEE 197	DERSFOYADIYEOMMIDGLGPACPTREPPLGASGDWPPHLSTKEE	1927	묽
KEQ 636	DENSDQNSRSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQ	579	S
PYP 192	AGAPPEQREPTPYP	1888	밁
P 578	QVPHVWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVABERRNALFPEVFSPTP	521	Ş
188	ELEGGPYSPLGKDYRKAEGEREGEGG	1862	밁
QQA 520	PKATMSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQA 520	. 461	Ś
À 186	LAEIPÞWVPKDRPLÞÞAPLSÞAPAÞÞTÞAPEPHTPVPFS-WGLAEYDSVVAAVQEGAA	1805	밁
ATS 460	APEVRKVNRIPPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATS	411	Š
PSW 180	DKLTRSPFEIISPPASPPEMTGQRVPSAPGQESPVPDTESTAPMRNEPTTPSW	1752	밁
410		363	Ş
EEÉ 175	TFLDEGPDEOETTPLOHTPRSPWTSDFKDFQEPLPQKGLEVERWLAESPVGLPPEEE	1695	뮍
QRE 362 :		311	ફ
RES 169	KSPEQEVRYWRDRDITLQQDAYWRELSCORKVWFPHELDGQGARPRYCEERES	1,642	뮍
REQ 310	PGSLASVESPGTPKETPIEREIRLAQEREADLREQ	276	5
164	GSKAPVPAWEG	1598	밁
VDD 275	GTPAGTTPGASQAPKAFNKPHLANGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDD 275	218	S

Search completed: March 3, 2006, 13:36:29 Job time : 47.8912 secs Colden Wildly & Box

Run

92

Title:

Searched

```
Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Post-processing: Minimum Match 0%
Maximum Match 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Perfect score:
                                                                                                                                                                                                                                                      8 205
9 205
10 203
11 197.5
12 195.5
13 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                           3583
3260
2061.5
246
210.5
209.5
209.5
   185.5
185.5
184.5
184.5
183.1
183.1
182.5
182.5
182.5
180.1
180.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            eqq
9eq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-646-873-42
3583
1 MDRVTRYPILGIPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   UniProt_05.80:*
1: uniprot_sprot:*
2: uniprot_trembl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       March
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2166443 seqs, 705528306 residues
                                                                                                                                                                                                                                                                                                                                                                                                                          100.0
91.0
57.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Listing
              MDRVTRYPILGIPQAHRGTG.....HKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3, 2006, 13:19:17 ; Search time 259.327 Seconds (without alignments) 1847.299 Million cell updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
   1103
1103
1103
11095
1978
9478
1978
1978
1978
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11558
11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Match
first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100%
45 gi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         chosen parameters:
                                                                                                   Q80TU6 MOUSE
Q55VU3 CRYNE
Q753B3 NEUCR
ACINU MOUSE
Q52FLI MAGGR
Q52KG1 MOUSE
MDC1 MOUSE
                                                                                                                                                                                                                                                                    CS021 HUMAN
CS021 HOUSE
CS021 MOUSE
CSX09 XENLA
Q8CSW1 MOUSE
Q4CSW1 MOUSE
Q4CSW1 TETMG
Q5U301 RAT
AKAP2 HUMAN
Q5T721 HUMAN
Q78696 NEUCR
Q5KUZG HUMAN
Q5SPV1 CRYNE
Q5KUZG HUMAN
                                                           Q872C7_NEUCR
Q4UU12_XANCP
RFIP1_HUMAN
                                                                                                                                                                                                                          Q96FF7_HUMAN
Q5KKE6_CRYNE
Q80VW7_MOUSE
                 BSN_HUMAN
BSN_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ㅂ
                                              Q6ZPF9_MOUSE
                                                                                                                                                                                                             BSN_MOUSE
Q9EQJ5_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5.1.7
Biocceleration Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2166443
                                                                                                                                                                                                            Q55pv1
Q96ff7
Q5kke6
Q80vw7
Q88737
                                                                         Q872c7
Q4uu12
                                                                                                      Q52kg1
Q5pav9
                                                                                                                                                                                Q80tu6
Q55vu3
                                                                                                                                                                                                                                                                                     Q5kdk5
Q5jtz4
                                                                                                                                                                                                                                                                                                                                                                                                                                           Q8ivt2 homo sapien
Q5rbh3 pongo pygma
                                           Q6zpf9
                                                              Q6wkz4
                                                                                                                                                                                                                                                                                                                                                  Q9y2d5
                                                                                                                                                                                                                                                                                                                                                                  Q5u301
                                                                                                                                                                                                                                                                                                                                                                                046389
                                                                                                                                                                                                                                                                                                                                                                                                                              09d279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cell_updates/sec
                 homo sapien
mus musculu
homo sapien
rattus norv
                                                                                                                                                                                                                                                                                                                                    homo
                                                                         neurospora
xanthomonas
                                                                                                        mus musculu
                                                                                                                        mus musculu
                                                                                                                                    mus musculu magnaporthe
                                                                                                                                                                                cryptococcu
                                                                                                                                                                                                 mus musculu
                                                                                                                                                                                                             mus musculu
                                                                                                                                                                                                                                           homo sapien
cryptococcu
                                                                                                                                                                                                                                                                         homo sapien
cryptococcu
                                                                                                                                                                                                                                                                                       cryptococcu
homo sapien
                                                                                                                                                                                                                                                                                                                    neurospora
                                                                                                                                                                                                                                                                                                                                                                                tetraodon n
                                                                                                                                                                                                                                                                                                                                                                                               mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                             xenopus lae
                                                                                                                                                                                                                                                                                                                                                                                                                              mus musculu
                                                                                                                                                                   neurospora
                                                                                                                                                                                                                                                                                                                                                                  rattus norv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 679
                                                                                                                                                                                                                               musculu
                                                                                                                                                                                                                                                                                                                                                sapien
                                                                                                                                                                                                                                                                                                                                    варien
                                                                                                                                                                                                                                                                                                                                                                                                                                         pygma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 1
CS021 HUMAN
ID CS021 HUMAN
AC QBIVT2;
DT 13-SEP-2005
                    HGNC; HGNC:2:
Coiled coil:
COILED
                    SEQUENCE
                    545
679 1
```

Result

AA;

75357 MW;

Potential. ; D2881CF5087E61F8 CRC64;

Database

176.5 4.9 1369 2 Q4RYQ8_TETNG 176 4.9 2173 1 MDCI_MAGMU 175 4.9 1271 2 Q758I75_MBUCR 174.5 4.9 1115 2 Q59IW5_MOUSB 174 4.9 4322 2 Q7XXNI_ORYSA 173.5 4.8 1151 1 ETBDC_HUMAN 173.5 4.8 1147 2 Q7S757_NEUCR 172.5 4.8 1147 2 Q7S757_NEUCR 172.5 4.8 1140 2 Q6MW56_NEUCR 172.5 4.8 1160 2 Q6MW56_NEUCR 172.5 4.8 1160 2 Q6MW56_NEUCR 172.5 4.8 1160 2 Q6MW56_NEUCR 172.5 4.8 1272 2 Q7NNI4_GLOVI 172.5 4.8 1272 2 Q7NNI4_GLOVI 172.5 4.8 1272 2 Q7HNI4_GLOVI 172.5 4.8 1272 2 Q7HNI4_GLOVI 172.5 4.8 1272 2 Q7STFT MOUSB 171.5 4.8 1099 2 Q59IW7_MOUSB 171.5 4.8 1524 2 Q4S7V9_TETNG	45	44	43	42	41	40	39	38	37	36	35	34	33	32
1369 2 2173 1 1277 2 1115 2 4322 2 1151 1 2468 1 1147 2 1160 2 3277 2 4227 2 1262 2 1524 2	171	171.5	171.5	172	172.5	172.5	172.5	173	173.5	174	174.5	175	176	176.5
000000000000000000000000000000000000000	4.8	8	4.8	4.8	4.8	8	4.8	4.8	4.8	4.9	4.9	4.9	4.9	4.9
2 Q4RYQ8_TETNG 2 MDCI_MACMU 2 Q7SCI_NEUCR 2 Q55IW5_MOUSE 2 Q7XXN1_ORYSA 1 BTEDC_HUMAN 1 MAP1B_HUMAN 1 MAP1B_HUMAN 2 Q7S757_NEUCR 2 Q6MW56_NEUCR 2 Q6MW56_NEUCR 2 Q4HY74_G1BZE 2 Q59LW7_MOUSE 2 Q4S7V9_TETNG 2 Q4S7V9_TETNG	454	1524	1099	4221	3277	1160	1147	2468	1151	4322	1115	1271	2173	1369
Q4RYQ8_TETNG MDC1_MACMU Q7S817_NEUCR Q591W5_MOUSE Q7XXN1_ORYSA BTBDC_HUMAN AP1B_HUMAN Q7S757_NEUCR Q6MW56_NEUCR Q7WN14_GLOV1 Q4HY74_GIBZE Q591W7_MOUSE Q58709_TETNG Q4S7V9_TETNG	N	N	N	N	N	N	N	۳	μ	N	N	N	-	N
	Q4S7V9_TETNG	Q5AZQ2_EMENI	Q59IW7_MOUSE	Q4HY74_GIBZE	Q7NNI4_GLOVI	Q6MW56_NEUCR	Q7S757_NEUCR	MAP1B_HUMAN	BTBDC_HUMAN	Q7XXN1_ORYSA	Q59IW5_MOUSE	Q7S8I7_NEUCR	MDC1_MACMU	Q4RYQ8_TETNG
	tetraodon n	aspergillus	mus musculu	gibberella	gloeobacter	neurospora	neurospora	nomo sapien	nomo sapien	oryza sacıv	mus musculu	neurospora	macaca mula	tetraodon n

ALIGNMENTS

## WEDLINES-2338257; Pubmed-12477932; DOI=10.1073/pnas.242603899; WA Strausberg R.L., Feingold B.A., Grouse L.H., Derge J.G., A Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., A Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., A Hopkins R.F., Jordan K., Moore T., Max S., Rubin G.M., Hong L., A Staple-ton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E., Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., A Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., A Raha S.S., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., A Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Glbbs R.A., Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Glbbs R.A., A Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., A Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Butterfield Y.S.N., Krzywinski M.I., Schatz J., Myers R.M., "Generation and initial analysis of more than 15,000 full-length human and mouse CDNA sequences"; Jeco. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002). Eukaryota; Metazoa; Mammalia; Eutheria; 13-SEP-2005 (Rel. 13-SEP-2005 (Rel. Protein C19orf21. EMBL; BC042125; AAH42125.1; -; EMBL; BC052236; AAH52236.1; -; This Swiss-Prot entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN the European Bioinformatics Institute. There are no rest Name=C19orf21; Ensembl; ENSG00000099812; Homo sapiens use as long as its content is in no way rissuE=Brain, NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA]. NCBI\_TaxID=9606 domo sapiens (Human) T00636; T00636. HGNC:27000; C19orf21. (Rel. 48, Created) (Rel. 48, Last seq (Rel. 48, Last ann and Colon; STANDARD; Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Primates; Catarrhini; Hominidae; Last sequence update) Last annotation update) PRT; mRNA. mRNA. 679 There are no modified and ₹ this restrictions TEMBL a collaboration outstation 18

```
CCC TILL
                                                                                                                                                                                      음 성
                                                                                                                                                                                                                8 8 8 8 8 8 8
                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                    음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 679
                                                                        CS021 PONPY STANDARD; PRT; 685 AA.

QSRBH3;

QSRBH3;

13-SEP-2005 (Rel. 48, Created)

13-SEP-2005 (Rel. 48, Last sequence update)

13-SEP-2005 (Rel. 48, Last annotation update)

Protein C19orf21 homolog.

Pongo pygmaeus (Orangutan).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi,

Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homir
 This
                 The German cDNA consortium; Submitted (NOV-2004) to the
                                  TISSUE=Kidney
                                                                                                                                                     Ydnod
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ÷
                                                        _TaxID=9600;
                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
 Swiss-Prot
                                                                                                                                                                                     661
                                                                                                                                                                                                     661
                                                                                                                                                                                                                      109
                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MKTYRLDAGDADERRLCDLERERWAVIQGQAVRKSSTVATLQGTEDHGDERTEGEPRSTE
                                                                                                                                                                                                                                                                                                                                                                                                                          MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                      VSESPFFSPIHLHSNVAWTVEDFVDSAPFGQRKKEQWYAGINFSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                      PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                          QEREADLREQRGLRQATDHQELVEIPTRPLUTKLSLTTAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                  QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                      KNAMAERWESRIYASEEDD
                                                                                                                                                                                                KNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                       SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDONSRSSSOASGITGSYS
                                                                                                                                                                                                                                                                SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                          PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                         REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                  REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
llarity 100.0%;
Conservative (
 entry
                                          [LARGE
 8,
                  the
 copyright.
                                          SCALE
                 EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 3583; DB 1;
Pred. No. 9.1e-172;
0; Mismatches 0;
                                                                                                                                                                                                      679
                                          MRNA]
 片
 18
 produced through
                                                                                                                                                                                                                                                                                                                                                                                                                                                            PARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              679;
 ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                            Hominidae;
 collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                       660
                                                                                                                                                                                                                                      660
                                                                                                                                                                                                                                                                        600
                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
RESULT
CS021 N
ID CS
AC QS
AC QS
DT 13
DT 13
DT 13
DT 13
OS M
OS M
OS EL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SHAPES
                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                     음 성
                                                                                                                                   В
                                                                                                                                                8
                                                                                                                                                                 유
                                                                                                                                                                                                뮹
                                                                                                                                                                                                                8
                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                        음 중
                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 621
CS021 MOUSE STANDARD; PRT; 648 AA. 090273; 13-SEP-2005 (Rel. 48, Created) 13-SEP-2005 (Rel. 48, Last sequence update) 13-SEP-2005 (Rel. 48, Last annotation update) Protein C19orf21 homolog.
Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Verte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Coiled
COILED
                                                                  TSUOM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                      601
                                                                                                                                                                      541
                                                                                                                                                                                      535
                                                                                                                                                                                                      481
                                                                                                                                                                                                                       475
                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                       415
                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             621;
                                                                                                     199
                                                                                                                    655
                                                                                                                                                      595
                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CR858675;
                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              551
685 AA;
```

```
between the Swiss Institute of Bioinformatics and the Ethe European Bioinformatics Institute. There are no restuse as long as its content is in no way modified and this
                                                                                                                                 GKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAP
                                                                                                                                                                                                                                                                   LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                     MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
IRVTRHKNAMAERWESRIYASEEDD
                                           REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSS-----DSILSPAPDARAADPAPEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                              VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                             RKVNRIPPDAYQPYLSPGTPQLEPSAFGAFSKPSGLSTVDTEAATSPKATMSPRHLSESS
                                                                                                                                                                                      RKVNRIPPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                 VLRQGVSYSVRAYPGQPSPRGLHLETGEDEGLKVYRLGARDAHQGRPTWAVHPEDGEDEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCTGPEASGWGQDEPQTWPTDYKAQQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAH90887.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    575
75892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  91.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MW:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 3260; DB
Pred. No. 1.5e-1
19; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Potential.
, A3A99F4343396E81
                       679
 685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; DB 1;
1.5e-155;
nes 39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the EMBL outstation or it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      statement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  on
ie
                                                                                                                                                                              480
                                                                                                                                                                                                    474
                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                               414
                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                             660
                                                                 654
                                                                                       600
                                                                                                             594
                                                                                                                                   540
                                                                                                                                                        534
                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ğ
```

Craniata; Vertebrata; Euteleostomi;

```
RA Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo S.,
RA Nikaido I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa H.,
RA Nikaido I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa H.,
RA Nikaido I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa H.,
RA Nikaido I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa H.,
RA Schriml L.M., Kasegawa Y., Nogami A., Schonbach C., Gojobori T.,
RA Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J.,
RA Schriml L.M., Kanapin A., Matsuda H., Batalov S., Beisel K.W.,
RA Baldar E., Dragani T.A., Fletcher C.F., Forrest A., Frazer K.S.,
RA Grimmond S., Gustincich S., Hirokawa N., Jackson I.J., Jarvis E.D.,
RA Kanai A., Kawaji H., Kawasawa Y., Kedzierski R.M., King B.L.,
RA Konagaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A.,
RA Konagaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A.,
RA Maglott D.R., Maltais L., Marchionni L., McKenzie L., Miki H.,
RA Nagashima T., Numata K., Okido T., Pavan W.J., Pertee G., Pesole G.,
RA Ravasi T., Reed J.C., Reed D.J., Raid J., Ring B.Z., Ringwald M.,
RA Sandelin A., Schneider C., Semple C.A., Setou M., Shimada K.,
RA Wilming L.G., Wynshaw-Boris A., Yanagisawa M., Yang I., Yang L.,
RA Yuan Z., Zavolan M., Zhu Y., Zimmer A., Carninci P., Hayateu N.,
RA Shiraki T., Waki K., Kawai J., Aizawa K., Arakawa T., Pukuda S.,
RA Hara A., Hashizume W., Imotani K., Ishii Y., Itoh M., Kagawa I.,
RA Miyazaki A., Sakai K., Sasaki D., Shibata K., Shinagawa A.,
RA Miyazaki A., Yoshino M., Waterston R., Lander E.S., Rogers J.,
RA Miyazaki A., Sakai K., Kayasi D., Shibata K., Shinagawa A.,
RA Miyazaki A., Sakai K., Kayasi D., Shibata K., Shinagawa A.,
RA Miyazaki A., Sakai K., Kayasi D., Shibata K., Shinagawa A.,
RA Miyazaki A., Sakai K., Kayasi D., Shibata K., Shinagawa A.,
RA Maryashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       AKEDLINE=22388257; Pubmede=12477932; DOI=10.1073/pnas.242603899;

AKEDLINE=2238257; Pubmede=12477932; DOI=10.1073/pnas.242603899;

AKEDLINE=2238257; Pubmede=12477932; DOI=10.1073/pnas.242603899;

AKEDLINE=2238257; Pubmede=12477932; DOI=10.1073/pnas.242603899;

AKEDLINE=2238257; Pubmede=12477932; DOI=10.1073/pnas.242603899;

AKEDLINE=2338257; Pubmede=12477932; DOI=10.1073/pnas.24260389;

Butter=1248257; Pubmede=12477932; DOI=10.1073/pnas.242603899;

BUTTET=1248257; Pubmede=12477932; DOI=10.1073/pnas.24260389;

BUTTET=1248250; Pubmede=12477932; DOI=10.1073/pnas.24260389;

BUTTET=1248250; Pubmede=12477932; DOI=10.1073/pnas.24260389;

BUTTET=1248250; Pubmede=12477932; DOI=10.1073/pnas.24260389;

BUTTET=1248250; Pubmed=12477932; DOI=10.1073/pnas.2426036;

BUTTET=1248250; Pubmed=12477932; DOI=10.1073/pnas.2426038;

BUTTET=12482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Birney B., Hayashizaki Y.;
"Analysis of the mouse transcriptome 60,770 full-length CDNAs.";
Nature 420:563-573(2002).
[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUCLEUTIUE SEQUENCE (LARGE SCALE PRANT).
MEDLINE=22354668) PODMOd=12466651; DOI=10.1038/nature01266;
Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mammalia;
Muroidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUCLEOTIDE SEQUENCE
                                                                                                             EMBL; AK020266; BAB32049.1; -; mRNA.
EMBL; BC013508; AAH13508.1; -; mRNA.
Ensembl; ENSMUSG00000035852; Mus musculus
                                                                                                                                                                                                                                                                                         This Swiss-Prot entry is copyright. It is produbetween the Swiss Institute of Bioinformatics the European Bioinformatics Institute. There a
      SEQUENCE
                                                         MGI; MGI:1926156;
Coiled coil.
                                                                                                                                                                                                                                                                                                                                                                                                                                     and mouse cDNA sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN=FVB/N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUCLEOTIDE
                                                                                                                                                                                                                                                                 Duot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eutheria;
Muridae, M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE [LARGE SCALE MRNA].
      648 AA;
                                                                                                                                                                                                                                                                    as its
                                                                                                                                                                                                                                                                                                                                                                                                            Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-Col
                                                                                          9130017N09Rik.
      534
72281
                                                                                                                                                                                                                                                                 formatics Institute. There are no content is in no way modified and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Euarchontoglires; Glires; Rodentia; Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    lon;
      MW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mue.
      Potential.
; 1E395B70763B3D1F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MRNA]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   based on functional annotation
                                                                                                                                                                                                                                                                                                                     is produced through a cormatics and the EMBL
                                                                                                                                                                                                                                                                       this
                                                                                                                                                                                                                                                                                                     restrictions
                                                                                                                                                                                                                                                                       statement
                                                                                                                                                                                                                                                                                                                                                            collaboration
                                                                                                                                                                                                                                                                                                                              outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human
                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         С
F
                                                                                                                                                                                                                                                                          8
```

```
RESULT
ID Q5XG09
ID Q5XG09
ID Q5
D7 255
D7 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                               09 XENLA
Q5XG09;
Q5XG09;
TISSUE=Spleen;
MEDLINE=22341132; PubMed=12454917; DOI=10.1002/dvdy.10174;
Wisin S.L.. Strausberg R.L., Wagner L., Pontius J., Clifton
                                                                                                                                                       Xenopus laevis (African clawed frog).
Eukaryota, Metazoa, Chordata, Craniata, Ve
Amphibia, Batrachia, Anura, Mesobatrachia,
                                                                                                                                                                                                                                                                               25-OCT-2004 (TrEMBLrel.
25-OCT-2004 (TrEMBLrel.
25-OCT-2004 (TrEMBLrel.
                                                                                                                                                                                                                                     LOC495240 protein.
Name=LOC495240;
                                                                                                               NCBI_TaxID=8355;
                                                                                                                                             Xenopodinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  428;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 MKTYRL-DAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ᆫ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  H
                                                                                                                                                                                                                                                                                                                                                                         XENLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LAQEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLI-TAPRRERGRPSLYVQRDIVQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LANGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTP--DENSDONSRSSSQASGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NR I PLDAYQPYLGPGTPKLEFSAFGVYSKPSGVSTEDTKATVFQKATESPRHVSESSGRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NRIPPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTABAKAATSPKATMSPRHLSESSGKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ETQREEDHRREGLQVGRASTPDWPSQDPQPGLQRSLSSDCILS--PDARATDPAPEARKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ETQREEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LAQEREAELREQRGLGRAAGHQELVQIPSRPLLSKMSLTETPPRRDRGRPSLYVQRDMVQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LANGYTTAVTSPMKEVTLE--KSFHVSPARSIHIVNDPGSQTQAESPETPKETPIEREIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQR-KKEQWYAGINPSDGINSEVLEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LQKSQSSDLLEREMESVLRREREVAEERRNAFFPEVFSPVPAEDESHEQDSRSSSRASGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LSSKQEWSKPPG--KATNVGVVRLGNFHLRPLRFKVPDVPQGTETPHTWGWEVAGGPILR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IKSYHLDDSSDTLCRORRELEAERWAVIOSOAVRKGGTVATLOAASDHGDLRIARQPQST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TRVKRHKNLLAERWEAHI YASEDEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALR
                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                         Xenopus;
                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       57.5%;
62.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               66;
                                                                                                                                                                                                                                                                                  Created)
Last sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 2061.5;
Pred. No. 1.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .5; DB
l.8e-95;
                                                                                                                                                                   Vertebrata; Euteleostomi;
ia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    148;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GWSQGDLQAWSTEYQTRPD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   648;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      43;
              ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ----EDEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10
```

```
S
                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                ş
                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SORE C PRESENTATION OF THE PROPERTY OF THE PRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RX MEDLINE=2238257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RX Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RX Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RX Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RX Altechul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RX Altechul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RX Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RX Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hong L.,
RX Hopkins R.F., Jordan B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RX Hopkins R.F., Jordan B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RX Hopkins R.F., Journal R., Toshiyuki S., Carninci P., Prange C.,
RX Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RX Raha S.S., McEwan P.J., McKernan K.J., Malek J.A., Gunararne P.H.,
RX Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RX Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RX Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RX Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RX Richards J., Worley R.C., Shevchenko Y., Bouffard G.G.,
RX Rahley J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RX Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RX Rodrigues A.C., Grimwood J., Schmutz J., Myers R.M.,
RX Rodrigues A.C., Grimwood J., Schmutz J., Myers R.M.,
RX Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences ",
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Richardson P.;
"Genetic and ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Klein S. Gerhard D.S.;
Klein S. Gerhard D.S.;
Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
EMBL; BC084662; AAH84662.1; -; mRNA.
EMBL; BC084662; AAH84662.1; -; mRNA.
EMBL; BC084662; AAH84662.1; -; mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE=Spleen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       initiative.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match
                                                                                                                                                                                                                                                                                                                                              370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  314
   353
                                                                490
                                                                                                                                       324
                                                                                                                                                                                                          430
                                                                                                                                                                                                                                                                              292
                                                                                                                                                                                                                                                                                                                                                                                                              256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDH
                                                                SNETMSAQHDYSLGDLSQPQTPVNDTLNEYILEEGSKYDQGFYSPSSMLQDIDDQLDYHA
                                                                                                                                                                                                          VLKDDDSDLSDRFVKSVSVSFLPEEQDSGLDDLSIKSQDTTVMETLSNYFSMDNISDSGA
                                                                                                                                                                                                                                                                              PI-----
                                                                                                                                                                                                                                                                                                                                           GETPLVKAERVNCISEDQPTMNQRLMADASPEPSADIDLQDEKVSKRSAEEFVSATASFT
                                                                                                                                                                                                                                                                                                                                                                                                              REENKVRA------VPTW------ASVQVVDDPGSLASVES--PGTPKET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LIMENTINGPNYKPPPKRSVSANLFTVRPFYKSSEASKSYSCITVTN----PSVPCVQSVQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LSLEQANKGAPHSSPARGTPAG---TTP--GASQAPKAFNKPHLANGHVVPIKPQVKGVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LESHOKYKERKOKLOQOGGSP--PAVKANHLPPVLSETTAVKKEDIVTEQIDFLAARKOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HIRVRKVRPSE----EVQELEKERLELIKSQAVKKNSGITTKWWNPPQEKTIEEQLDSDQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    --FEGYTYPASPNSSNSSRRSSKDGDILPKIIKKEAKFELRTFHEEKKPSKLFDDFNEKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YSVHAYTGQPSPRGLHSENREDEGWQVY-----RLGARDAHQGRPTWALRPEDGEDK 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PVVEITEASE----VMDP-----VKMNGHSQNGNKDEP------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PILGIPOAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQGVQRQGVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       225:384-391 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
-RDIVQETQREEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                genomic
                                                                                                                                                                                                                                                                              -EREIR-----LAQEREADLREQRGLRQATDHQELV-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -----GDPRTPG-----PP---RSTPLEENVVDREQIDFLAARQQF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tools
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for
                                                                                                                                   -EIPTRPLLTKLSLITAPRRERG--RPSLYVQ-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 246; DB 2;
Pred. No. 0.00027;
7; Mismatches 283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       research:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           283; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 848;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The NIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           270;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           67
                                                                                                                                       352
                                                                                                                                                                                                          489
                                                                                                                                                                                                                                                                              323
                                                                                                                                                                                                                                                                                                                                              429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        141
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멂
                                                                                         RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Airawa K., Izawa M., Nishii K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Airawa K., Izawa M., Nishii K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Radota K., Matsuda H.A., Ashburner M., Batalov S., Quackenbush J.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N. H.,
RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
RA Hayashiyaki Y., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=C57BL/6J; TISSUE=Testis;
MEDLINE=99279253; PubMed=10349636; DOI=10.10
Carninci P., Haysshizaki Y.;
"High-efficiency full-length cDNA cloning.";
Meth. Enzymol. 303:19-44(1999).
                       Nature
[3]
                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN=C57BL/6J; TISSUE=Testis; DOI=10.1038/35055500; MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mammalia; Eutheria; Eu
Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (Mouse)
Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAR-2003
01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Name=Akap2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus adult
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q8C5W1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QBC5W1_MOUSE
    NUCLEOTIDE SEQUENCE
                                                              "Functional annotation of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ibrary,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ulus adult male te
clone:4932411M01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GVLVQNVIQQALAEKAGFKDSTH---------SEDSDKSNYFDDN--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DPAPEVRKVNRIPPDAYOPYLSPGTPOLEFSAFGAFGKPSSLSTAE-AKAATSPKATMSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DDFESHKTKRRDRMD----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NKSAPVLPTRTVSYKTAPGKIEKIRNPSSPRGESFPIQPDLLLEEATGSQRPKNLMETLM 799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SRSSSQASGITGSYSVS------ESPFFSPIHL------HSNVAWTVE 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ETEISVGPFKLRSKKQKTLSMIEEEIRAAQEREQDLKKQRERQSIQSQHSP-----S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GWEVAGAP-ALRLOKSOSSDILERERESVIRREOEVAEERRNALFPEVFSPTPDENSDON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ENFOLKODNPLSTK-SLSPTEONCTEEHKQESYFSKYSOSAELR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RHLSESSGKPLSTKQEASKPPRGCPQANRGVVRW-EYFRLRPLRFRAPDEPQQAQVPHVW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EPLTEKSEIQ----SCSSPPVSPGRDQRE----VFEPPQVSSPVQVTKAITIPK-TFEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Glires; Rodentia; Sciurogna
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23, Created)
23, Last sequence update)
25, Last annocation update)
25, Last annocation update)
testis cDNA, RIKEN full-length enriched
01 product:A kinase anchor protein 2, fu
                                                              full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOI=10.1016/S0076-6879(99)03004-9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DATVLDAVRVNRRKSALALKWEAGIYANRDDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         880
                                                                mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₿
                                                              cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ----STASILATO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               585
```

```
밁
                                                                                                                        ঠ
                                                                                                                                                                      밁
                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                      ફ
밁
                                      ঠ
                                                                                  유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUCLEOTIDE SEQUENCE.

REPAINACSTRIJ(61; TISSUB-Testis;

RESTRAINACSTRIJ(61; TISSUB-Testis;

RESTRAINACSTRIJ(61; TISSUB-Testis;

RA Adachi J., Aizawa K., Akimura T., Hara A., Hashizume W.,

Pukuda S., Furuno M., Hanagaki T., Hara A., Hashizume W.,

RA Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Kasukawa T.,

RA Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,

RA Hori F., Imotani K., Ishii Y., Kondo S., Konno H., Kouda M., Koya S.,

RA Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S.,

RA Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M.,

RA Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M.,

Nishi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Okazaki Y.,

RA Kurihara C., Matsuyama T., Miyazaki K., Sakazume N., Sano H.,

RA Kurihara C., Matsuyama T., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,

RA Saaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,

RA Saaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,

RA Tagawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,

RA Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.;

RU Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.;

RU Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.;

RU Submitted (ARR-2002) to the EMBL/GenBank/DDBJ databases.

RMEI, AKO77020; BAC36571.1; -; mRNA.
                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 163; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P., Konno H., Akiyama J., Nishi K., Kitsunai T., Tashic H., Itoh M., Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A., Yasmoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K., Fujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M., Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J., Okazaki Y., Muramatsu M., Inoue Y., Kina A., Hayashizaki Y., "RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer."; Genome Res. 10:1757-1771(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., It Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.; Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.; Permanta M., Hayashizaki M.; Belected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The FANTOM Consortium, the RIKEN Genome Exploration Research Group Phase I & II "Analysis of the mouse transcriptome based on functional 60,770 full-length cDNAs.":
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 68888
68888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN-C578L/6J; TISSUE-Testis;
STRAIN-C578L/6J; TISSUE-Testis;
MEDLINE-20499374; PubMed-11042159; DOI-10.1101/gr.145100;
MEDLINE-20499374; PubMed-11042159; DOI-10.1101/gr.145100;
                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=C57BL/6J; TISSUE=Testis;
MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GO:0051018; P:protein kinase A binding; IPI.
GO:0007015; P:actin filament organization; IDA.
GO:0008104; P:protein localization; IPI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GO:0007178; P:transmembrane receptor protein serine/threo.
                                           188
                                                                                                                                                                        174
                                                                                                                                                                                                                                                               128
280
                                                                                  230
                                                                                                                             151
                                                                                                                                                                                                                    93
                                                                                                                                                                                                                                                                                                      37
                                                                                                                                                                                                                                                               GERANGHSTDQPQDL---
                                                                                                                                                                                                                                                                                                    GPEASGWGQDEPQTWPTDHRAQQGVQRQGVSYSVHAYTGQPSPRGLHSENREDEGW----
LQQQQQQQLQQQQLQQQQLQQQQLQQQLSTSQPC-TAPAAHKHLDGIEHTKEDVV
                                                                                                                             AVRKSSTVATLQGTPDHGDPRTPGPPRSTPLEENVVD---
                                                                                                                                                                           KKEAKFELRAFHEDKKPSKLFEEDEREKEQFCVR----KVRPSEEMIELEKERRELIRSQ
                                           ----REQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGA------
                                                                                    AVKKONPGIAA-----
                                                                                                                                                                                                                  -QVYRLGARDAHQGRPTWALRPEDGEDKEMKTYRLDAGDADP-RRLCDLERERWAVIQGQ
                                                                                                                                                                                                                                                                                                                                                                                                                                        880
                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                        A
                                                                                                                                                                                                                                                                                                                                                                                                                                        97137 MW;
                                                                                                                                                                                                                                                                                                                                                                        5.9%;
                                                                                                                                                                                                                                                                                                                                                    115;
                                                                                                                                                                                                                                                                                                                                                 Score 210.5; |
Pred. No. 0.01
L5; Mismatches
                                                                                  -KWWNPPQEKTIEEQLDEEHLESHRKYKERKEKRAQQEQLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                        1CD1888BA492C55D CRC64;
                                                                                                                                                                                                                                                               -LGNSLQAPASPSSSTSSHCSSRDGEFTLTTL
                                                                                                                                                                                                                                                                                                                                                                        ; DB 2;
                                                                                                                                                                                                                                                                                                                                                    280;
                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Carninci P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Team;
                                                                                                                                                                                                                                                                                                                                                      277;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tagami M.,
                                                                                                                                    .......
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     genes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Itoh
                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>:</u>.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ö.
    338
                                                                                                                                                                             229
                                                                                                                                                                                                                        150
                                                                                                                                                                                                                                                                                                             92
                                               227
                                                                                         279
                                                                                                                                  187
                                                                                                                                                                                                                                                                                                                                                        32;
```

vertebrate proto-karyotype.";

R ?	9 R	₽3	R R	₽ \$	₽ P	₽.	25	R.	U 7.	R R	28	38	88	8 8	<u>Q</u>	DE S	] F	Į,	a A	RESU Q4S3 ID	ф	5	δ (	문	Ş	타	S	망	Ş	Дb	ş	망	ફ	Db	S	Db	ş	Db	S	당	Ş	
ly vertebrate proto-karyotype.";	nlication i	Schachter V., Quetier F., Saurin W., Scarpelli C.,	ellis M., Volff JN., Guigo R., Zody M.C., Mesirov J.,	G., Lardier G., Chapple C., McKernan K.J., McEwan P.	, Skalli Z., Cattolico L., Poulain J., De Berardir	V., Jubin C., Castelli V., Katinka M., Vacher	Jatte D., Figher S., Luttalla G., Lossat C., Segu	celi E., Bouneau L., Fischer C., Ozouf-Costaz C., Bernot A.,	SEQUENCE.  Anny J.M., Brunet F., Petit J.L.		ietraddomtidae; ietrado	rpha; Acanthopterygii; Percomorpha; Tetraod	Neopterygii; Teleostei; Euteleostei; Neoteleo	Green purier). data: Craniata: Vertebrata: Euteleostomi	Names=GSTENG00024750001;	s, which generally proved an order	SEP-2005 (TrEMBLrel. 31, Last	2005 (TremBirel. 31, Last sequence update)	389;	ULT 6 3389_TETNG PRELIMINARY; PRT; 711 AA.	QH.		25 DSAPPGORKKEOWYAGINPSDGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679	789 GKIEKVKPPPSPTTEGPSLQPDLAPEEAAGTQRPKNLMQTLMEDY 833	574FSPTPDENSDQNSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPV 624	731 LRSRKQRTLSMIEBEIRAAQEREEELKRQRQVRQSTPSPRAKNAPSLPSRTTCYKTAP 788	536 LRLQKSQSSDLLERERESVLRREQEVABERRNALFPEV 573	671 LREKGPSOPPTAAOPSGPVNMEETRPEGGYFSKYSEAAELRSTASLLATQESDVMVGPFK 730	509 LRFRAPDEPQQAQVPHVWGWEVAGAPA 535	EAGSQTPGSEKP	PLSTKQEAS	551 DNESEGREGVSKSFSDHGFYSPSSTLGDSPSVDDPLEYQAGLLVQNAIQQAIAEQVDKAE 610	LSTAEAKAATSPKATM	506 TTVLETLSNDFSMDNISDSGASNETPSALQENSLADFSLPQTPQT 550	DSILSPAPDARAADPAPEVRKVNR	446 GPLSKIWAEDGEFTSARAVITVVKDEDHGILDQFSRSVNVSLTQEELDSGLDELSVRSQD 505	KLSLITAPRRE-RGRPSLYVQRDIVQETQREEDHRR	399 GTLEDGGTQAAKEQKAPCVSESQSAGAGPANAATQGKEGPYSEPSKR 445	271 QVVDDPGSLASVESPGTPKETPIEREIRLAQEREADLREQRGLRQATDHQELVEIPTR 328	339 TEQIDESAARKOFQLMENSRQTLAKGQSTPRLESIKPYYKPLGSIHSDKPPTILRPATVG 398	228SQAPKAFNKPHLANGHVVPIKPQVKGVVREENKVRAVPTWASV 270	

```
RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFFICE
AG
                                                                     δ
                                                                                            밁
                                                                                                            ş
                                                                                                                                  문
                                                                                                                                                S
                                                                                                                                                                       밁
                                                                                                                                                                                       5
                                                                                                                                                                                                           밁
                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                             吊
                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
01 RAT
Q5U301 RAT
Q5U301;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nature 431:946-957(2004)
[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    preliminary data.

preliminary data.

L; CAABO1014752; CAG04893.1; -; Genomic_DNA.

711 711 744ACCBB1617CB84
                                                                                              591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    126
                                                                                                                                   555
                                                                                                                                                      500
                                                                                                                                                                         538
                                                                                                                                                                                                              486
                                                                                                                                                                                                                                385
                                                                                                                                                                                                                                                    429
                                                                                                                                                                                                                                                                     351
                                                                                                                                                                                                                                                                                                           303
                                                                                                                                                                                                                                                                                                                              317
                                                                                                                                                                                                                                                                                                                                                 263
                                                                                                                                                                                                                                                                                                                                                                   257
                                                                                                                                                                                                                                                                                                                                                                                     232
                                                                                                                                                                                                                                                                                                                                                                                                        201
                                                                                                                                                                                                                                                                                                                                                                                                                           193
                                                                                                                                                                                                                                                                                                                                                                                                                                               153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 133
                                                                                                                                                                                          441
                                                                                                                                                                                                                                                                                        369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           POAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQGVQRQGVSYSVHA 72
                                                                          TVEDPVDSAPPGORKKEOWYAGINPSDGINSEV-LEAIRVTRHKNAM
                                                                                               EELKKORKEQ--PAV-
                                                                                                                QEVAEERRNALFPEVFSPTPDENSDONSRSSSOASGITGSYSVSESPFFSPIHLHSNVAW
                                                                                                                                                                                                                                                                                                           READLREORGUROA-----TDHQELVEIPTRPL-----LTKLSLITAPRRERGRPSLY
                                                                                                                                                                                                                                                                                                                                                 AVPTWASVQV-------VDDPGSLASV--ESPGTPKETPIEREIRLAQE
                                                                                                                                                                                                                                                                                                                                                                    FSSARROFLOGGATKRDVPPHIYSAKPFLKSRVGGDADETGEGHVTWSDKGLAGEFTCAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKEMKTYRLDAGDAD 132
                                                         GKIEKVRLAPP---
                                                                                                                                                     RWEYFRLRPLRFRAPD-EPQQAQVPHVWGWEVAGAPALRLQKSQSSDLLERERESVLRRE
                                                                                                                                                                                                            PRIKIOSSYARALAS-SAPAPAPAPAPAPAPVPR-----PAPVYRPPSPPSPEKPEFSY
                                                                                                                                                                                                                                                                                                                              AVMTILTEEEDGKGHFHPSFHLEESDSGLDEPSPAAPVNGQSNGSPTEDEL-----E
                                                                                                                                                                                                                                                                                                                                                                                                        SLKKYQE----RKQQKQTPVYSYGQVRQAGGQPQVSGQPTVVTFDPBLIRKEDIVEEQID
                                                                                                                                                                                                                                                                                                                                                                                                                           FLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAP------
                                                                                                                                                                                                                                                                                                                                                                                                                                               -EEVQELERERQELIKEQAVKRNPEIA------HRWWNPPQEVPLEEQ-LDAEQLE 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRRICCHERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTPLEENVVDREQID 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FQEERRPAKLFTPGDE----QQVRVTRR-----RPT-----------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PDAH -- PPLVVQGQRPTTL----
                                                                                                                                   -----RAPEVEP-----ASGPFRLRSKKQRTLSMIEEEIRAAQQRE
                                                                                                                                                                       FSKYSEAAELRSTASAS--
                                                                                                                                                                                          FGAFGKPSSI-STAEAKAATSPKATMSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVV 499
                                                                                                                                                                                                                                P----QPGLRRALSSDSILSPAPDARAADPAPEVRKVNRIPPDAYQPYLSPGTPQLEFSA 440
                                                                                                                                                                                                                                                    SPVSSSPAGGRRPEVRVVSPDETSESQRSAPEETRPQ---APSAPPPQPVSPPQRSKNGG
                                                                                                                                                                                                                                                                      -----G
                                                                                                                                                                                                                                                                                        YQAGILVQNAIQNALAAHNEDQWQPGDAPPSPVSPPSASPSSPVPVSSSPLSAAGAPSFH
                                                                                                                                                                                                                                                                                                                                                                                      -KAFNKPHLANG-----HVVPIKPQV-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   711 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
          PRELIMINARY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   77525 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; Score 209.5; DE; Pred. No. 0.015; 91; Mismatches 2
                                                                                              -TARPSSQSHVRTGPRQSTMCPADRMKSNSLPARLTLTAKTAP
                                                         --VSPSPSEGALSDAGSEDSTGSRPKNFM
          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A44ACCBB1617CE84 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----LSQEDTARRSNGHAQSEDLASSGAKFELRA
          870
          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              244;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                         683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              277;
                                                                                                                                                                                                                                                                                                                                                                                     KCVVREENKVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                 618
                                                                                                                                                                                                                                                                       384
                                                                                                                                                                                                                                                                                                                                                 302
                                                                                                                                                                                                                                                                                                                                                                    316
                                                                                                                                                                                                                                                                                                                                                                                       262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          125
                                                                                                                                                                                                                                                    485
                                                                                                                                                                                                                                                                                         428
                                                                                                                                                                                                                                                                                                                              368
                                                                                               645
                                                                                                                                    590
                                                                                                                                                                         554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                S
                                                                 S
                                                                                                    S
                                                                                                                          밁
                                                                                                                                          S
                                                                                                                                                             밁
                                                                                                                                                                                Ś
                                                                                                                                                                                                                    Ś
          밁
                                              뫄
                                                                                    문
                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                         NIH MGC Project;
                                                                                                                                                                                                                                                                                                                                                 TISSUE=Kidney;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Muridae; Murinae; Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                           NUCLEOTIDE SEQUENCE.
                                                                                                                                             151
           391
                                                                                    280
                                                                                                                                                                                   93
                                                                                                                                                                                                                        37
                                                                                                                                                                                                                                           161;
                                                                                                                                                                                                      GERANGHSTDQPQDM
                                                                                                                                                                                                                                                                                870 AA;
                                                                                                                                                                                                                                           Conservative 107;
                                                                                                                                                                                                                                                                                                                                                                             Acad.
                                                                                                                                                                                                                                                   5.8%;
                                                                                                                                                                                                                                                                                95941 MW;
```

```
RX MEDLINE=2238857; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Frange C.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Frange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Willalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Willalon D.K., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Mhiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Schein J.E., Jones S.J.M., Marra M.A.;
Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences ";
PT.C. Natl Dad Sci II c a Gallega-1600170001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-FEB-2005 (TrEMBLrel. 29, Created)
01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
01-FEB-2005 (TrEMBLrel. 29, Last annotation updat
A kinase (PRKA) anchor protein 2 (Predicted).
Name=Akap2_predicted;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (NOV-2004) to the EMBL/GenBank/DDBJ databases. EMBL; BC085790; AAH85790.1; -; mRNA. Ensembl; ENSRNOG00000011504; Rattus norvegicus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurogna
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GO; GO:0016301; F:kinase activity; IEA.
                                                                                REENKVRAVPTWASVQVVDDPGSLASVESPGTP-KETPIEREIRLAQEREADLREQRGLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AVRKSSTVATLQGTPDHGDPRTPGPPRSTPLEENV-----------
VEDSSTQAAKEQKALCVSESQSAGAGTGNAATQGKEGPYSEP-
                                                                                                                                                                                                                                                     QFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKP-HLANGHVVP--IKPQVKGVV
                                                                                                                                                                                                                                                                                                                                              LQQQQQQQLQQLQQLQQQQQQQLSTSQLCTAPAAHEHLDSIEHTKEDVVTEQIDFSAARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AVKKNPGIAA-----KWWNPPQKKTIEEQLDEEHLESHRKYKERKEKRAQQEQLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KKEAKFELRAFHEDKKPSKLFEEDEHEKEQFCIR----KVRPSEEMIELEKERRELIRSQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -QVYRLGARDAHQGRPTWALRPEDGEDKEMKTYRLDAGDADP-RRLCDLERERWAVIQGQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GPEASGWGQDEPQTWPTDHRAQQGVQRQGVSYSVHAYTGQPSPRGLHSENREDEGW----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 207.5; DB 2;
Pred. No. 0.024;
7; Mismatches 273;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  516C22DA6D7A2DD2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -----LGNSLQAPASPSSSTSSHCSSRDGEFTLTTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels 301;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                   -VDREQIDFLAARQ 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 870;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  150
                                                                                         314
                                                                                                                                                                              390
                                                                                                                                                                                                                                                              255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            173
        436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92
```

र्

437 315

486

outstation -

```
AKAP2 HUMAN STANDAKU,

AKAP2 HUMAN STANDAKU,

09Y2D5; Q9UG26;
16-OCT-2001 (Rel. 40, Created)

16-OCT-2001 (Rel. 40, Last sequence update)

13-SEP-2005 (Rel. 48, Last annotation update)

13-SEP-2005 (Rel. 48, Cast annotation update)
                                                                                                                                                                                                                                                                                                   NUCLEOTIDE SEQUENCE [MENA] (ISOFORM A).
SCHUETZE N., Reichel S., Rucer N., Eulert
"Homo sapiene AKAP-2 complete cDNA sequence.";
submitted (DEC-2000) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Name=AKAP2; Synonyms=KIAA0920;
Homo sapiens (Human).
                                                                                                           Nagase T., Ishikawa K.-I., Suyama M., Kikuno R., Hirosawa M., Miyajima N., Tanaka A., Kotani H., Nomura N., Ohara O.; "prediction of the coding sequences of unidentified human genes. XII The complete sequences of 100 new cDNA clones from brain which code for large proteins in vitro."; DNA Res. 6:63-70(1999).
Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                  NUCLEOTIDE SEQUENCE
                                                        rissue-Brain,
                                                                            NUCLEOTIDE SEQUENCE [LARGE SCALE
                                                                                                                                                                                                                           WEDLINE=99246063; PubMed=10231032;
                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AIAEQVDKAEVHTSKEGSEQQEPGAMVEEAG----SQAPGSEKPQGMFAPPQVSSPVQEK 646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DFSLPQTPQTDNPSEGREGVSKSFSDHGFYSPSSTLGDSPSVDDPLBYQAGLLVQNAIQQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          器
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QTLMEDYETHKSKRRERMD-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRHKNAMAERWESRIYASEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A-QNAPSLPSR---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SDONSRSSSOASGITGSYS--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LATQESDVMVGPFKLRSRKQRTLSMIEEEIRAAQEREEELKRQR-----QVRQSTPSPR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RDVLPKILPGEDKTLREKGPSQPPTAVQPSGPVNMKETRPEGGYFSKYSEAAELRSTASL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RWEYFRLRP-----LRFRAPDEPQQAQVPH------VWGW-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -----EAKAATSPKAT--MSPRHLSESSGKPLSTKQEASKPPRGC----PQANRGV--V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PYLSPGTPQLE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LDELSVRSQDTT----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRIPPDAYQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----PLSKLWAEDGEFTSARAVLTVVKDEDHGILDQFSRSVNVSLTQEELDSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QATDHQELVEIPTRPLLTKLSLITAPR-----RERGRPSLYVQRDIVQETQREEDHR 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -EVAGAPALRLOKSOSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDEN
                                                                                                                                                                                                                                                                                                                                                                                                                                  Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                [LARGE SCALE MRNA]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -TTCYKTAPGKIEKVKPPPSPTTEGPSLQPDLAPEEAAGAQRPKNLM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ----VLETLSNDFSMDNISDSGASNETP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -FSAFGAFGKPSSLSTA-----
                                                                            MRNA]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -----VSESPFFSP-----IHLHSNVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -DSSVLEATRVNRRKSALALRWEAGIYANQE
                                                                              QF
                                                                                                                                                                                                                                                                  (ISOFORM A)
                                                                              770-1103
   protein kinase
                                                                              (ISOFORM
                                                                                                                                                                                                                                                                                                                                            ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -NALOENSLA
                                                                              ₿
                                                                                                                                                                                                                                                                                                                                            Jakob
                                                                                                                                                                      XIII.
     ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                             밁
                                                                              ð
                                                                                                                   밁
                                                                                                                                                    S
                                                                                                                                                                                           밁
                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                  밁
   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alternative splicing; Co
REGION 797 810
COILED 3 117
COILED 483 521
COILED 940 980
COMPBIAS 512 521
VARSPLIC. 1059 1071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AJ303079; CAC38839.1; -; mRNA.
EMBL; AB023137; BAA76764.2; ALT_INIT; mRNA.
EMBL; AL10268; CAB53707.1; -; mRNA.
Ensembl; ENSG00000157654; Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HGNC; HGNC:372; AKAP2.
MIM; 604582; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GO; GO:0019899; F:enzyme binding; NAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                May be involved in establishing polarity in signaling systems or in integrating PKA-RII isoforms with downstream effectors to capture, amplify and focus diffuse, trans-cellular signals carried by CAMP (By similarity).

ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Name=B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Name=A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Event=Alternative
                                                                                                                                                                                                                                                                                                                                                                                                                         529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100
                                                                                                                                                        386
                                                                                                                                                                                                                                                                        625
                                                                                                                                                                                                                                                                                                           276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      159
       472
                                                                                  438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Note=No experimental confirmation available;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IsoId=Q9Y2D5-1; Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IsoId=Q9Y2D5-2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RAPHEDKKPSKLFEDDEHEKEQYCIR----KVRPSEEMLELEKERRELIRSQAVKKNPGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RDAHQGRPTWALRPEDGEDKEMKTYRLDAGDADP-RRLCDLERERWAVIQGQAVRKSSTV: 158
                                                                                                                                                                                                                                 LSLITAPRR-----ERGRPSLYVQRDIVQETQREEDHRREGLHVGRASTPDWVSEGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAKWWNPPQEKTIEEQLDEEHLESHKKYKERKERRAQQEQLLLQKQLQQQQQQPPSQLCT
       ESSGKPLSTKQEAS.
                                                                                                                                                        QPGLRRALSSDSILSPAPDARAADPAPEVRKVNRIPPDAYQPYLSPGTPQLE-----
                                                                                                                                                                                                                                                                                                                                                FSIKPFYRPLGSVNSDKPLTNP------RPPSVGGPPEDSGASAAKGQKS-----
                                                                                                                                                                                                                                                                                                                                                                                                                         APASSHERASMIDKAKEDIVTEQIDFSAARKQFQLMENSRQAV-----AKGQ---STPRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPRSTPLEENVVDR-----EQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTP--
                                           GVSKSFSDHGFYSPSSTLGDSPLVDDPLEYQAGLLVQNAIQQAIAEQVDKAVSKTSRDGA
                                                                                ----FSAFGAFGKPSSLSTA---
                                                                                                                     ---VLETLSNDFSMDNISDSGASN----ETTNALQENSLADFSLPQTPQTDNPSEGRGE
                                                                                                                                                                                               DGEFTSARAVLTVVKDDDHGILDQFSRSVNVSLTQEELDSGLDELSVRSQDTT-----
                                                                                                                                                                                                                                                                        PGALETPSAAGSQGNT-----ASQGKEGPYSEPSKRG---
                                                                                                                                                                                                                                                                                                         PGSLASVESPGTPKETPIEREIRLAQEREADLRE--QRGLRQATDHQELVEIPTRPLLTK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                878
1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ĀΆ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5.7%;
19.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  878
                                                                                                                                                                                                                                                                                                                                                                                     GASQAPKAFNKPHLANGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  122071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence=VSP_004096;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    splicing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Coiled
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₩.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Potential.
Poly-Gln.
Missing (in isoform |
/FTId=VSP 004096.
E -> G (in Ref. 3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      coil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 205; DB 1;
Pred. No. 0.042;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Potential.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Potentia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PKA-RII subunit binding domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Named isoforms=2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B501182135112FE5 CRC64;
```

----LQGTPDHGDPRTPG----

528 174

225

468

228;

Indels

292;

Gaps

Length 1103;

巴

밁 ঠ

유 ঠ

> 678 817 819 761 582 707

HUMAN

닭 र्

> 529 647 500

밁 8 흡. 청

밁 S 밁 ঠ 밁 8

591

454 531 427

ARESULT HOMARCA THE RESULT HOMARCA TO A CONTROL TO A CONT

KPPR-GCP-QANRGVVRWEYFRLRP---

--LRF

511

829

----EAKAATSPKA-TMSPRHLS

471 769 ----PLSKIWAE

385 664

437 717 333

275

```
PACE SERVICE OF THE BETTER BET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8 8 8 8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ILT 9
21 HUMAN
Q5T721 HUMAN 1
Q5T721;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted
EMBL; AL35
EMBL; AL62
EMBL; AL15
EMBL; AL15
EMBL; AL35
EMBL; AL15
                                        THEMS 1, 1984 B. 1, 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-FEB-2005 (TrEMBLrel. 29, Created)
01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
13-SEP-2005 (TrEMBLrel. 31, Last annotation update)
13-SEP-2005 (TrEMBLrel. 31, Last annotation update)
A kinase (PRKA) anchor protein 2.
A kinase (PRKA) anchor protein 2.
Name-AKAP2; ORFNames-RP11-470J20.3-001;
Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUCLEOTIDE Lawlor S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Phillimore
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kimberley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (MAY-2005)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pandian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=9606;
                              996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAPALRLQKSQSSDLLERERESVLRREQEVAEER------RNALFPEV-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RGPPOPLPAVOPSGPINMEETRPEGSYFSKYSEAAELRSTASLLATQESDV-----MV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TAPGKIEKVKPPPSPTTEGPSLQPDLAPEEAAG-----TQRP-----KNLMQTLM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GPFKLRSRKQRTLSMIEEEIRAAQEREEELKRQRQVLQSTQSPRTKNA--PSLPSRTCYK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RAPDEP------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EQQG-PEATVEEAEAAAFGSEKPQSMFEPPQVSSPVQEKRDVLP----KILPAEDRALRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (MAY-2005)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (MAY-2005)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ----FSPTPDENSDONSRSSSOASGITGSYSVSESPFFSPIHLHSNVAWTVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Euarchontoglires;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the
                                    -; Genon
-; Genon
JOINED,
JOIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genomic_DNA.
Genomic_DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Genomic
                                 Genomic DNA.
                                                                                                                                                                                                                                                                                                                                                               Genomic DNA.
Genomic DNA.
Genomic DNA.
Genomic DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genomic_I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genomic DNA.
Genomic DNA.
Genomic DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QQAQVPHVWGWEVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         531
                                    RESULT
Q7S696
ID Q7
AC Q7
DT 01
DT 01
DT 01
DT 01
DT 01
OT 01
NT 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                      유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                 LT 10
96_NEUCR
Q7S696_1
                                                            01-MAR-2004 (TrEMBLrel. 26, Created)
01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
01-FEB-2005 (TrEMBLrel. 29, Last saquence update)
Predicted protein (Hypothetical protein H4H7.100).
Name=NCU04757.1; Synonyms=H4H7.100;
                                                                                                                                                                                                                                       Q78696;
                                                                                                                                                                                                                                                                                                                                                                                                                                      1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     770
                                                                                                                                                                                                                                                                        NEUCR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RAPDEP-----
                                              crassa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FSAFGAFGKPSSLSTA----
```

```
EMBL; AL353598; CAI10811.1; JOINED; Genomic_DNA.

EMBL; AL353806; CAI10811.1; JOINED; Genomic_DNA.

Ensembl; ENSG00000157654; Homo sapiens.

Kinase.

SEQUENCE 1103 AA; 122071 MW; B501182135112FE
EDYETHKSKRRERMDDSSYTSKLLSCKVTSEVLEATRVNRRKSALALRWEAGIYANQEEE
                                                                                                    TAPGKIEKVKPPPSPTTEGPSLQPDLAPEEAAG-----TQRP-----KNLMQTLM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PGSLASVESPGTPKETPIEREIRLAQEREADLRE--QRGLRQATDHQELVEIPTRPLLTK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RAFHEDKKPSKLFEDDEHEKEQYCIR----KVRPSEEMLELEKERRELIRSQAVKKNPGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RDAHQGRPTWALRPEDGEDKEMKTYRLDAGDADP-RRLCDLERERWAVIQGQAVRKSSTV
                                                 DPVDSAPPGQRKK--EQWYAGINPSDGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                                         GPFKLRSRKQRTLSMIEEEIRAAQEREEELKRQRQVLQSTQSPRTKNA--PSLPSRTCYK
                                                                                                                                                                                                                                                          GAPALRLQKSQSSDLLERERESVLRREQEVAEER-----RNALFPEV-----
                                                                                                                                                                                                                                                                                                                 RGPPQPLPAVQPSGPINMEETRPEGSYFSKYSEAAELRSTASLLATQESDV-----MV
                                                                                                                                                                                                                                                                                                                                                                                                                     EQQG-PEATVEEAEAAAFGSEKPQSMFEPPQVSSPVQEKRDVLP----KILPAEDRALRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ESSGKPLSTKQEAS------KPPR-GCP-QANRGVVRWEYFRLRP-----LRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GVSKSFSDHGFYSPSSTLGDSPLVDDPLEYQAGLLVQNAIQQAIAEQVDKAVSKTSRDGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ---VLETLSNDFSMDNISDSGASN----ETTNALQENSLADFSLPQTPQTDNPSEGRGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QPGLRRALSSDSILSPAPDARAADPAPEVRKVNRIPPDAYQPYLSPGTPQLE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DGEFTSARAVLTVVKDDDHGILDQFSRSVNVSLTQEELDSGLDELSVRSQDTT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LSLITAPRR-----ERGRPSLYVQRDIVQETQREEDHRREGLHVGRASTPDWVSEGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PGALETPSAAGSQGNT-----ASQGKEGPYSEPSKRG------PLSKLWAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FSIKPFYRPLGSVNSDKPLTNP------RPPSVGGPPEDSGASAAKGQKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -----GASQAPKAFNKPHLANGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APASSHERASMIDKAKEDIVTEQIDFSAARKQFQLMENSRQAV-----AKGQ---STPRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PPRSTPLEENVVDR-----EQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTP--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAKWWNPPQEKTIEEQLDEEHLESHKKYKERKERRAQQEQLLLQKQLQQQQQQPPSQLCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AT-----LQGTPDHGDPRTPG----
                                                                                                                                                     ---FSPTPDENSDQNSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5.7%; Score 205; DB 2; L
19.9%; Pred. No. 0.042;
tive 105; Mismatches 228;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B501182135112FE5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----EAKAATSPKA-TMSPRHLS
                                                                                                                                                                                                                                                                                                                                                               -----QQAQVPHVWGWEVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 1103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              292;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                   679
                                                                                                       1040
                                                                                                                                                                                                                                                                                                                                                                       531
                                                                                                                                                                                                                                                                                                                                                                                                                           884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          158
                                                                                                                                                                                                                                                                  573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           225
```

1095 Å

```
RA Jaffe D., FitzHugh W., Ma L.-J., Smirnov S., Purcell S., Rehman B., RA Jaffe D., FitzHugh W., Ma L.-J., Smirnov S., Purcell S., Rehman B., RA Elkins T., Engels R., Wang S., Nielsen C.B., Butler J., Endrizzi M., RA Qui D., Ianakiev P., Pedersen D., Nelson M., Washburne M., Schulte V., RA Selitrennikoff C.P., Kinsey J.A., Braun E.L., Zelter A., Schulte U., RA Kothe G.O., Jedd G., Mewes W., Staben C., Marcotte E., Greenberg D., RA Kornel M., Kamylor J., Thomann N., Barrett R., Gnerre S., RA Konmal M., Kamyloselis M., Mauceli E., Bielke C., Rudd S., Frishman D., RA Krystofova S., Rasmussen C., Metzenberg R.L., Perkins D.D., Kroken S., Cogoni C., Macino G., Catcheside D., Li W., Pratt R.J., Osmani S.A., RA Cogoni C., Macino G., Catcheside D., Li W., Pratt R.J., Osmani S.A., RA Yarden O., Plamann M., Seller S., Dunlap J., Radford A., Aramayo R., RA Varden O., Alex L.A., Mannhaupt G., Ebbole D.J., Freitag M., RA Paulsen I., Sachs M.S., Lander E.S., Nusbaum C., Birren B.; "The Genome Sequence of the Filamentous Fungus Neurospora crassa."; U. 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                 . 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ৪
                                                                                                                         밁
                                                                                                                                                          S
                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                       밁
                  ð٠
                                                   밁
                                                                                र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hypothetical SEQUENCE 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            preliminary data
EMBL; AABX01000328; EAA31054.1; -; Genomic_DNA
EMBL; BX908811; CAF06122.1; -; Genomic_DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    German Neurospora genome project; submitted (JAN-2004) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUCLEOTIDE SEQUENCE.
Schulte U., Aign V., Hoheisel J., Brandt P., F
Schulte U., Aign V., Mannhaupt G.;
Nyakatura G., Mewes H.W., Mannhaupt G.;
Submitted (JAN-2004) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Fungi; Ascomycota; Pezizomycotina; Sordariomycetes; Sordariomycetidae; Sordariales; Sordariaceae; Neurospora.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAUTION: The sequence shown here is derived EMBL/GenBank/DDBJ whole genome shotgun (WGS)
                                                                                                                                                                                                                                                                     651
                                                                                                                                                                                                                                                                                                                                         595
                                                                                                                                                                                                                                                                                                                                                                                                              540
                  420
                                                                                      365
                                                                                                                           740
                                                                                                                                                            311
                                                                                                                                                                                               707
                                                                                                                                                                                                                                254
                                                                                                                                                                                                                                                                                                    194
                                                                                                                                                                                                                                                                                                                                                                          135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        152;
                                                     787
                                                                                                                                                                                                                                                                                                                                                                                                                                                 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                VVR---EENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLAQEREADLREQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DAPSSTMYTAEVSTPEPSAEQQEEEGQEQAKPQVEP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DGDTSYTYHLVCMGPEASGWGQDE-----PQTWPTDHRAQQGVQRQGVSYSVHAYTGQ
IPPDAYOPYLSPGTPQLEFSA----FGAFGKPS-----SLSTAEAKAATSPKATMSPRHLS
                                                                                                                                                                                                 AAKPAIPARPVKASPT-----SGGLEPAESAAPPROKP------
                                                                                                                                                                                                                                                                                                    LAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLANGHVVPIKPQVKG
                                                                                                                                                                                                                                                                                                                                       MAORFPSRDVWE-DSPESIOLOTEVSTPOODEEQTEEATAESPQVSPRTE--LPEPKID-
                                                                                                                                                                                                                                                                                                                                                                        RLCDL-ERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTPLEENVVDREQIDF
                                                                                                                                                                                                                                                                                                                                                                                                              QEELA-EKEARENGPDGFVKSSIPKSSSHQQKPSWV----QGQPHLLQEVKKEAAKARPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                PSPRGLHSENRED -- EGWQVYRLGARDAHQGRPTWALRPEDGEDKEMKTYRLDAGDADPR
                                                       EKKEKVPLSDARKGRA-----
                                                                                                                                                            RGLRQATDHQELVEIPTRPLLTKLSLITA-----PRRERGRPSLYVQRDIVQETQREED
                                                                                      HRREGLHV-----GRASTPDWVSEGPOPGLRRALSSDSILSPAPDARAADPAPEVRKVNR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1095 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein.
                                                                                                                                                                                                                                                                   -EKLIQKPEIEDKTPEPKEPAPTPÄVVTERKPSPPVIPARPTLPSRPSIPDRPKPKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              118854 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20.9%;
                                                                                                                           -AVPARPMGSKIAALQAGFMNDLNNRLRLGPQMPAKKEEAPAEEQEKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 203; DB
Pred. No. 0.052
96; Mismatches
                                                       -RGPQ---RRAPAA-----AKAAAAAAAAP-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E517C9D5C0385DC8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0.052;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fartmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 1095;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   from an
entry v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -----REGETFA-QAFARQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
В.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          198;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Holland
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                            193
                                                                                                                                                                                                                                                                                                                                                                                                                  . 594
                                                                                                                                                                                                                                                                                                        253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      539
                      471
                                                                                                                           786
                                                                                                                                                               364
                                                                                                                                                                                                  739
                                                                                                                                                                                                                                   310
                                                                                                                                                                                                                                                                      706
                                                                                                                                                                                                                                                                                                                                          650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       76
```

```
RESULT 11
Q5KDK5 CRYNE
ID Q5KDK5 C
AC Q5KDK5 C
DT 10-MAY-2
DR NUCLEDTI
RC STRAIN-J
RC STRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ্হ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q5KDK5 CRYNE
Q5KDK5;
10-MAY-2005 (
                                                                                                                                                                                                                                                                                                                                                                                              Vamathevan J., Miranda M., Anderson I.J., Fraser J.A., Allen J. Bosdet I.E., Brent M.R., Chiu R., Doering T.L., Donlin M.J., Bo'Souza C.A., Fox D.S., Grinberg V., Fu J., Fukushima M., Haas Huang J.C., Janbon G., Jones S.J.M., Koo H.L., Krzywinski M.I., Kwon-Chung K.J., Lengeler K.B., Maiti R., Marra M.A., Marra R., Mathewson C.A., Mitchell T.G., Pertea M., Riggs F.R., Salzberg Schein J.E., Shvartsbeyn A., Shin H., Shumway M., Specht C.A., Suh B.B., Tenney A., Utterback T.R., Wickes B.L., Wortman J.R. Wye N.H., Kronstad J.W., Lodge J.K., Heitman J., Davis R.W., Fraser C.M., Hyman R.W.,
                                                                                                                                                                                        InterPro;
InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bukaryota; Fungi; Basidiomycota; Hymenomycetes; Heterobasidiomycetes;
Tremellomycetidae; Tremellales; Tremellaceae; Filobasidiella.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Protein binding pr
ORFNames=CNG03630;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10-MAY-2005 (TrEMBLrel. 30, 10-MAY-2005 (TrEMBLrel. 30, 10-MAY-2005 (TrEMBLrel. 30,
                                                                                                                                                                                                                                                                                                                                                       Science
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Loftus B.J., Fung E., Roncaglia P., Rowley D., Amedeo P., Bruno D. Vamathevan J., Miranda M., Anderson I.J., Fraser J.A., Allen J.E., Bosdet I.E., Brent M.R., Chiu R., Doering T.L., Donlin M.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN-JEC21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Loftus B., Amedeo P.,
Van Aken S., Fraser C.
Submitted (MAY-2004) t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN-JEC21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cryptococcus neoformans var. neoformans JEC21.
                                                                                                                                                                                                                                                                                                                                                                                Cryptococcus neoformans."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PubMed=15653466; DOI=10.1126/science.1103773;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUCLEOTIDE SEQUENCE [LARGE SCALE
                                                                                                            InterPro;
                                                                                                                                     InterPro;
                                                                                                                                                               InterPro;
                                                                                InterPro;
                                                                                                                                                                                                                                          L; AE017347; AAW44761.1; -; Genomic_DNA.
GQ:0005509; F:calcium ion binding; TEA.
GO:0005065; F:guanyl-nucleotide exchange factor activity;
GO:0007242; P:intracellular signaling cascade; TEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    824
                      p; IPR011992; EF-Hand type.
p; IPR002048; EF hand Ca bd.
p; IPR00261; EPS15; homology.
p; IPR001331; GDS_CDC24.
p; IPR000108; Neu_cyt_fact_2.
p; IPR000219; RhoGEF.
p; IPR0003124; MH2_actin_bd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTP-----DENS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AEDKGGEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EAAAADTEVTNSSNTGSVPDEEAPKEEVKSLVTNTAG--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EAETEAESSAPADTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DQNSRSSQASGITGSYSVSESPFFSPIH-----LHSNVAWTVEDPVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ESSGKPLSTKQEASKPP-RGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -PPAVIEEKKEVAGPKLSFSASISYWAIDPESEEGGVSLGVAELKALEEKK----PKEKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -BAPKKEIKEDKTS-----EPES----EPSPLPEAITPEAPGAFPSTPAIERELKAQEET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein, putative.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ដូ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Roncaglia P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            --TSTÉAPAPEPVEAVEAEKAETAASETTEKVEDNRDATTASAKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SAPPGORKKEOWYAGINPSDGINSEVLEAIRVTRHKNAMAERWE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENOMIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Vamathevan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ٠
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -ETIVAEHVTRDGSGNVKPLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Utterbaćk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nski M.I.,
Marra R.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Haas B.J.,
                                                                                                                                                                                                                                                                                 IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ˈ<del>ʊ</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  921
```

```
RESULT 12
Q5JTZ4 HUMAN
ID Q5JTZ4 HUMAN E
AC Q5JTZ4;
AC Q5JTZ4;
DT 10-MAY-2005 (1
DT 10-MAY-2005 (1
DT 13-SEP-2005 (1
                                                                                                        5
                                                                                                                                   밁
                                                                                                                                                  5
                                                                                                                                                                     닭
                                                                                                                                                                                          S
                                                                                                                                                                                                                    유
                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                        ち 유
                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                          음 중
                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 5.5%; Score 197.5; D
Best Local Similarity 21.2%; Pred. No. 0.19;
Matches 136; Conservative 63; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF02205; WH2; 1.
PRINTS; PR00499; P67PHOX.
PRINTS; PR00452; SH3DOMAIN.
PRODOm; PD000066; SH3; 2.
SMART; SM00327; EH; 1.
SMART; SM00325; RhoGEF; 1.
SMART; SM00325; RhoGEF; 1.
SMART; SM00326; WH2; 1.
PROSITE; PS00741; DH 1; 1.
PROSITE; PS00101; DH 2; 1.
PROSITE; PS50031; EH; 1.
PROSITE; PS50031; EH; 1.
PROSITE; PS50031; EH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE;
Complete
SEQUENCE
                                                                                                                                                                            1031
                                                                                             1116 AASVGETSMLEPPQEEEEEKEQHGYEQIEK--PRVQIEGEDD 1155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  142
                                                                                                                                                                                                                                                                                                                                                                367
                                                                                                                                                                                                                                                                                                                                                                                                          307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PF00621; RhoGEF; 1.
PF00018; SH3_1; 2.
PF02205; WH2; 1.
                                                                                                                644
                                                                                                                                                        599
                                                                                                                                                                                               539
                                                                                                                                                                                                                     971
                                                                                                                                                                                                                                        512
                                                                                                                                                                                                                                                            916
                                                                                                                                                                                                                                                                                                    857
                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                           804
                                                                                                                                                                                                                                                                                                                                                                                     782
                                                                                                                                                                                                                                                                                                                                                                                                                            722
                                                                                                                                                                                                                                                                                469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KAEEAQKERDEARKRRLAEAG----GAAAEPKSEEKP-----AEPAAPSLKSAMKKPAAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTPLEENVVDREQIDFLAARQQFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            proteome.
1978 AA; 217438 MW;
                                                                                                                                                                                                                                                                                                                                                                                    AKAERRAR-----LEALQKEEEEERRQ
                                                                                                                                                                                                                                                                                                                                                                                                          LREQRGLROATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQREEDHR
                                                                                                                                                                                                                                                                                                                                                                                                                                                RAVPTWASVQVVDDPGSLA-----SVESPGTPK---ETPIEREIRLAQEREAD
                                                                                                                                                                                                                     LAQALFGNIMGGSSPSTSRPGSAAPQAPKEPPKALANVGGGNPEQGRGALLSAIQGGARL
                                                                                                                                                                                                                                                                                                                                                                REGLHVGR-----ASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLANGHVVPIKPQVKGVVREENKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ERKAYIREQAQRRIQERLKALGVSSE------DKEEEVDTSVQDRLEKERKEAEEKSR
                                                                                                                                                                             KKAQTVD-----KSGPPDIGRVIGDAAPPSHIRETPRE
                                                                                                                                                                                                                                                                                                                      PP----DAYQPYLSPG-----TPQLEFSAFGAFGK-PSSLSTAEAKAATSPKATMSPR
                                                                                                                                                                                                                                                                                                                                           EEALLAARKNRSLGASPVPPAAETP----KKEASSSAAPSPAPPAPPAPPAPPAPPA---
                                                                                                                                                                                                                                                                                                                                                                                                                             PPAPTPRSKAAPVPPPSRAHPAPAPPAAPTPPTPQPPTPKPDEDDPEELELRRREEAAAK
                                                                                                                                                        YSVSESPFFSPIHLHSNVAWTVEDPVDS-APPGQ-----RKKEQWYAGI-----NP
                                                                                                                                                                                               QKSQSSDLLERERESVLRREQEVALERRNALFPEVFSPTPDENSDQNSRSSSQASGITGS
                                                                                                                                                                                                                                                            ----PPAPPPPPADPAFQPPRG-PRSPPSEPEWEDIAEKQVDESDSSDDEYTTSRAGRQG
                                                                                                                                                                                                                                                                                HLSESSGKPLSTKQEASKPPRGCPQANRGVVRW------EYFRLRPLRF-
                                                                                                                                                                                                                                                                                                  PPAESAPSYNPFRKPGGAPGATPSPAAPAGGFNPFFKPPAAASVSPSPAAESPALAAPP-
 (TrEMBLrel. (TrEMBLrel.
                                          PRELIMINARY;
                                                                                                                                                                                                                                        -----RAPDEPQQAQVPHVWGWEVAGAPAL-----RL
  30,
31,
                                                                                                                 -EAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                    ----GPVEERAPSPAPPSEDSFISGNPNRQSIDWYAGLAADASHP
  Last sequence update)
Last annotation update)
                     Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7882A493A63A23DB
                                          949
                                          ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CRC64
                                                                                                                 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1978;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     209;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                          366
                                                                                                                                                                                                                                                              970
                                                                                                                                                                                                                                                                                                      915
                                                                                                                                                          643
                                                                                                                                                                             1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                  밁
                                      S
                                                               밁
                                                                             δ
                                                                                                 밁
                                                                                                                     δ
                                                                                                                                              밁
                                                                                                                                                             δ
                                                                                                                                                                                 밁
                                                                                                                                                                                                      5
                                                                                                                                                                                                                               片
                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Phillimore
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUCLEOTIDE
                                                                                                                                                                                                                                                                                                                 440
                                                                                                                                                                   438
                                                                                                                                                                                                            386
                                                                                                                                                                                                                                524
                                                                                                                                                                                                                                                                        484
                                                                                                                                                                                                                                                                                                                                                        388
                                                                                                                                                                                                                                                                                                                                                                                                 328
                       797
                                                                                                        689
                                                                                                                                                629
                                                                                                                                                                                                                                                    334
                                                                                                                                                                                                                                                                                           276
                                                                                                                                                                                                                                                                                                                                   226
```

```
Submitted (MAY-2005) to the EMBL/GenBank/DDBJ do
EMBL; AL353598; CAI40818.1; -; Genomic DNA.
EMBL; AL158823; CAI39562.1; -; JOINED, GENOMIC DNA.
EMBL; AL158823; CAI40818.1; JOINED; Genomic DNA.
EMBL; AL353598; CAI39562.1; JOINED; Genomic DNA.
EMBL; AL353598; CAI39562.1; JOINED; Genomic DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (Human).
Eukaryota; Metazoa; (
Mammalia; Eutheria; E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A kinase (PRKA) anchor protein 2 (Fragment). Name=AKAP2; ORFNames=RP11-470J20.3-007;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kimberley A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (MAY-2005)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100 RDAHQGRPTWALRPEDGEDKEMKTYRLDAGDADP-RRLCDLERERWAVIQGQAVRKSSTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LSLITAPRR-----ERGRPSLYVQRDIVQETQREEDHRREGLHVGRASTPDWVSEGP 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PPRSTPLEENVVDR-----EQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTP--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAKWWNPPQEKTIEEQLDEEHLESHKKYKERKERRAQQEQLLLQKQLQQQQQPPSQLCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RAFHEDKKPSKLFEDDEHEKEQYCIR----KVRPSEEMLELEKERRELIRSQAVKKNPGI
                                                                                                 GAPALRIQKSQSSDLLERERESVLRREQEVABER-
                                                                                                                                                                                                  RAPDEP-----QQAQVPHVWGWEVA 531
                                                                                                                                                                                                                                                                                                     ESSGKPLSTKQEAS------KPPR-GCP-QANRGVVRWEYFRLRP-----LRF
                                                                                                                                                                                                                                                                                                                                                          GVSKSFSDHGFYSPSSTLGDSPLVDDPLEYQAGLLVQNAIQQAIAEQVDKAVSKTSRDGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QPGLRRALSSDSILSPAPDARAADPAPEVRKVNRIPPDAYQPYLSPGTPQLE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DGEFTSARAVLTVVKDDDHGILDQFSRSVNVSLTQEELDSGLDELSVRSQDTT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PGALETPSAAGSQGNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PGSLASVESPGTPKETPIEREIRLAQEREADLRE--QRGLRQATDHQELVEIPTRPLLTK 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FSIKPFYRPLGSVNSDKPLTNP------RPPSVGGPPEDSGASAAKGQKS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APASSHERASMIDKAKEDIVTEQIDFSAARKQFQLMENSRQAV-----AKGQ---STPRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AT-----
                                               GPFKLRSRKQRTLSMIEEEIRAAQEREEELKRQRQVLQSTQSPRTKNA--PSLPSRTCYK
                                                                                                                                                RGPPQPLPAVQPSGPINMEETRPEGSYFSKYSEAAELRSTASLLATQESDV-----
                                                                                                                                                                                                                                                      EQQG-PEATVEEAEAAAFGSEKPQSMFEPPQVSSPVQEKRDVLP----KILPAEDRALRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ---VLETISNDFSMDNISDSGASN-----ETTNALQENSLADFSLPQTPQTDNPSEGRGE
                                                                                                                                                                                                                                                                                                                                                                                                      œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        949 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5.5%; Score 195.5; DB 2; ilarity 19.5%; Pred. No. 0.11; Conservative 104; Mismatches 221;
----FSPTPDENSDQNSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -GASQAPKAFNKPHLANGHVVPIKPQVKGVVRBENKVRAVPTWASVQVVDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Primates; Catarrhini; Homin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           104234 MW; 4E6ACAFC2A6F2EBD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----ASQGKEGPYSEPSKRG--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -----LQGTPDHGDPRTPG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels 301;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                   -RNALFPEV-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . - - - - PLSKLWAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              949;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                        ¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           327
     621
                                                                                                                                                                                                                                                                                                                                                                                                                                                             628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        387
                                                                                                      573
                                                                                                                                                                                                                                                                                                                                                          889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               437
```

. Qy 539 QKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGS 598 :   :   :	OY 512	916 PPAPPPPPAPAPAPAPAPAPAPAPAPAPAPAPAP	469 HLSE	Qy 421 ppDAYQPYLSPGTPQLERSAFGA-FGK-PSSLSTAEAKAATISPKATMSFK 468	804 EÉALLAAKKNRSIGÁSPVPPAAETPKEEASSSAAPSPÁPPAPPAPPAPPA	QPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI	Db 782 AKAERRAR	-roi	Db 722 PPAPTPRSKAAPVPPPSRAHPAPAPPAAPTPPTPQPPTPKPDEDDPBELELRRREEAAAK 781	Qy 262 RAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLAQEREAD 306	Db 671 RAEBAQKERDBARKRELABAGGAAABPKSEEKPAEPAAPSLKSAMKKPAAP 721	QY 202 SLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLANGHVVPIKPQVKGVVREENKV 261	Db 619 ERKAYIREQAQRRIQERLKALGVSSEDKEBEVDTSVQDRLEKERKEAEEKSR 670	QY 142 ERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTPLEENVVDREQIDFLAARQQFL 201	Query Match 5.4%; Score 194; DB 2; Length 1978; Best Local Similarity 21.6%; Pred. No. 0.29; Matches 128; Conservative 55; Mismatches 214; Indels 196; Gaps 22;	SQ SEQUENCE 1978 AA; 217418 MW; BDECC9512111209B CRC64;	EMBL; AAEYO	EMBL/GenBank/DDBJ whole genome shotgun (WGS) entr	Submitted (JUL-2004) to the EMBL/GenBank/DDBJ databases.  -1- CAUTION: The sequence shown here is derived from an	Wickes B.L., Fu J., Davis R.W.;	STRAIN-B-3501A; Fung E., Hyman R.W.,		Temellomycetidae; Temellales; Temellaceae; NCBI_TaxID=283643;	ns var. nec	ORFNames=CNBG1130;	13-SEP-2005 (TrEMBLrel. 31, Last annotation	13-SEP-2005 (TrEMBLIEL 31, Creat	RESULT 13 Q55PV1_CRYNE ID Q55PV1_CRYNE PRELIMINARY; PRT; 1978 AA. AC O55PV1_CRYNE PRELIMINARY;	ALRWEAGIY <i>i</i>	Qy 622 DPVDSAPPGQRKKEQWYAGINPSDGINSBYLEAIRYTRHKNAMAERWESRIYASEEDD 679 : :: :   :: :	Db 855 TAPGKIEKVKPPPSPTTEGPSLQPDHAPEKANGTQKPKNLMQTHM 899
. 8	B &		F &	ag d	2	a Q	SQ	F R	D R R	28.5	R R R	RT.	R R	RA RA	R R R R	RA RA	R R	R R	RA RA	RA A	222	7 R R	B O (	388	202	GN DE	ᄗᄗ	Q96F AC	(C)	Db :	ş

```
RA Strausherg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Altschul S.F., Zeeberg B.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B.S., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Stapleton M., Soares M.B., Toshiyuki S., Carninci P., Prange C.,
RA Stapleton M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Raha S.S., Loquellano N.A., Peters G.J., Malek J.A., Gunaratne P.H.,
RA Raha S.S., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Robak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Hichards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,
RA Pahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA Rhiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Wyers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Skalska U., Smailus D.E.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.,
Teneration and initial analysis of more than 15,000 full-length human
Teneration and Semmence "".
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 24.4.
104; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ULT 14
FF7_HUMAN
Q96FF7_HUMAN PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Name=LOC113230;
Name=LOC113230;
Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Chordata; Craniates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-DEC-2001 (TrEMBLrel. 19, 01-MAR-2004 (TrEMBLrel. 26, 01-MAR-2004 (TrEMBLrel. 26,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q96FF7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ensembl; ENSG00000141854; Homo sapiens NON_TER 1 1 1 05C0B4BF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Strausberg R.;
Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; BC011002; AAH11002.2; -; mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOC113230 protein (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ISSUE=Lung;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1064 YAPPSPPAAAP------GPVEERAPSPAPPSEDSFISGNPNRQSIDWYAGL 1108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1031 KKAQTVD-----KSGPPDIGRVIGDAAPPSHIRETPRE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     599 YSVSESPFFSPIHLHSNVAWTVEDPVDS-APPGQ------RKKEQWYAGI 641
353 RDIVQETQREEDHRREGIHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAP 412
                                                                                                                  107 REIRRSCEREESIRRSRGISPGRAGREIVELRVRPVLNLPGPGPALPRALERARAGAQMQ 166
                                                                                                                                                                                   295 REIRLAGEREADLREGRGLROATDHQELVEIPTRPLLTKLSLITA-PRR-ERGRPSLYVQ 352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 189 EQIDFLAARQQFL--SLEQANKGAPHSSPARG----TPAGTTPGASQAPKAFNKPHLANG 242
                                                                                                                                                                                                                                                                                                                                       243 HVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPK-----ETPIE 294
                                                                                                                                                                                                                                                           64 HPPP------GPKTSSSRSGSEAPHLRFPPCPEAPORPPEERFMETPIE 106
                                                                                                                                                                                                                                                                                                                                                                                                                9 KOVEILEQESEVLEPSVEQ-DAESPGLSTÄAGFESPEPGRODPGPSEÄQRÄ----EVQGQ 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          319 AA; 34686 MW; 05C0B4BFB10DA70C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5.4%; Score 193.5; DB 24.2%; Pred. No. 0.038;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             32; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ζ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 2; Length 319;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 127; Indels 167;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17;
```

Ş	망	Ş	B 8	M B Q	SORRE	3 R R				2 Z Z	2 2 2	2 P Z	R R C				8	333	Q5KKE ID AC	1000	문	Ş	Дb	Ş	망	Ş	문	გ	문
169 DPRTPGPPRSTPLEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPAR 217	SRSGST	110 ALRPEDGEDKEMKTYRLDAGDADPRRLCDLERERWAVIQGQ-AVRKSSTVATLQGTPDHG 168	52 PTDHRAQQGVQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTW 109	w	Science 307:1321-1324(2005).  Science 307:1321-1324(2005).  Science 307:1323-1324(2005).  EMBL; AE017343; AAW42345.1; -; Genomic_DNA.  Complete proteome; Hypothetical protein.  SEQUENCE 1558 AA; 167093 MW; 09C7C501DD33CBBE CRC64;	.M., Hyman R.W.; oome of the basidiomycetous yeast and human pati	., Shin H., Shumway M., Spec back T.R., Wickes B.L., Wort odge J.K., Heitman J., Davis	. ‱ 	Thiu R., Doering T.L., Donlin M.J.,	466; DOI=10.1126/science.1103773; Fung E., Roncaglia P., Rowley D., Amedeo P., Bruno D Miranda M Buderson I T Braser I a allen I R	NUCLEOTIDE SEQUENCE (LARGE SCALE GENOMIC DNA). STRAIN-JEC21;	Van Aken S., FraBer C.; Submitted (MAY-2004) to the EMBL/GenBank/DDBJ databases. [2]	21; Amedeo P.	NUCLEOTIDE SEQUENCE.	Eukaryota; rungi; Basiqiomycota; nymenomycetes; Heterobasiqiomycetes; Tremellomycetidae; Tremellales; Tremellaceae; Filobasidiella. NCBI_TaxID=214684;	mans var. neoformans JEC21.	ypothetical protein.	10-WAY-2005 (TrEMBLrel. 30, Created) 10-WAY-2005 (TrEMBLrel. 30, Last sequence update) 10-WAY-2005 (TrEMBLrel. 30, Last annotation update)	6 CRYNE 6 CRYNE PRELIMINARY; PR Q5KKE6;	ų	287 -SLTASRGDG 295	- 83	252 SLLEQEVRAVREREQELQRQRRSVYGTAEFKEPTP 286	ERESVLRREQEVAE	225 PEPGGRPRSAVQGGCRVLGSAPPPFTP	471 SESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHV 525	188 RARSPPQPLGELKRFFEAAAGSGSSAGAGDGAGPQRL 224	413 EVRKVNRIPEDAYQEYLSEGTEQLEESAEGAEGKESSLSTAEAKAATSEKATMSERHL 470	167 RDIEREAHRQAAL187

8 8	g &	g Q	문 &	당 성	용 성	д Q	B 8	B 8	ρ <b>Q</b>	유 왕	皮
646 1477	586 1430	555 1370	513 1310	461 1250	408 1196	361 1141	304 1084	272 1024	241 972	218 913	863
GINSEVLEAIR	SRSSQASGITGSYSVSESPFFSPIHLHSNVAMTVEDPVDSAPPGQRKKEQWYAGINPSD 645	LRREPPEVFSPTPDENSDQN 585 :	APDEPQQAQVPHVWGWEVAGAPALRLQKSQSSDLLERERESV 554	PKATMSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFR 512	ADPAPEVRKVNRIPPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATS 460	REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARA 407	EADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ 360    : :	VVDDPGSLASVESPGTP-KETPIEREIRLA-QER 303	NGHTVVPIKPQVK	GTPAGTTPGASQAPKAFNKPHLA 240	

Search completed: March 3, 2006, 13:26:04 Job time: 265.327 secs

```
Regult
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                         168
166.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-646-873-42
3583
1 MDRVTRYPILGIPQAHRGTG.....HKNAMAERWESRIYASBEDD 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      572060 segs, 82675679 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     March 3, 2006, 13:35:46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Issued_Patents_AA:*

1: /cgn2_6/ptodata/1/iaa/5_COMB.pep:*

2: /cgn2_6/ptodata/1/iaa/6_COMB.pep:*

3: /cgn2_6/ptodata/1/iaa/H_COMB.pep:*

4: /cgn2_6/ptodata/1/iaa/RE_COMB.pep:*

5: /cgn2_6/ptodata/1/iaa/RE_COMB.pep:*

6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0
100.0
31.6
31.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4444.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length DB
                                                                             2468
25468
25468
25468
252
25843
25843
25843
25843
25844
25844
25844
25844
25844
25844
25844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
26844
268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1008
US-09-050-516-42
US-10-278-547-42
US-10-278-547-47
US-10-278-547-47
US-10-278-547-43
US-10-278-547-43
US-09-050-516-45
US-09-050-516-45
US-09-050-516-45
US-09-252-991A-29419
US-09-976-594-726
US-09-938-092-1135
US-09-949-016-10237
US-09-10-1138A-30
US-09-952-991A-30
US-09-862-027-79
US-08-452-654-7
US-08-452-654-7
US-08-452-654-2
US-08-452-6558-7
US-08-452-6558-7
US-08-452-6558-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Search time 91.0612 Seconds (without alignments) 616.473 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         572060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Description
                                                                                                                     Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                             Sequence
Sequence
Sequence
                                                                             Sequence
    42, Appl
47, Appl
47, Appl
43, Appl
45, Appl
45, Appl
45, Appl
45, Appl
46, Appl
29419, Ap
```

45	44	43	42	41	40	39	38	37	36	35	<b>3</b> 4	ω u	32	31	30	29	28	
158	158	161	161	162	162	163	164.5	164.5	165.5	166	166	166	166	166	166	166	166	
4.4	4.4	5	5	5	5	4.5	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	
1326	588	791	507	904	288	1197	1344	1341	666	2973	2973	2973	2843	2843	2843	2843	2843	
N	N	N	ผ	N	N	N	N	N	N	N	μ	۲	N	N	N	N	H	
US-09-688-188B-15	US-09-252-991A-30690	US-09-252-991A-31894	US-09-252-991A-31473	US-09-976-594-615	US-09-914-259-10	US-09-252-991A-30833	US-09-949-016-10925	US-09-949-016-6890	US-09-252-991A-17054	US-09-136-605-7	US-09-003-687A-7	US-08-821-355A-7	US-09-538-092-1007	US-08-449-731-2	US-08-450-582-7	US-08-450-582-2	US-08-370-235A-2	
Sequence 15, App.	sequence subsu,				10,				17054,	Sequence /, Appi	sequence /, App.	Sequence /, Appl	sequence 1007,		· .	,		

## ALIGNMENTS

```
RESULT 2
US-10-278-547-42
; Sequence 42, Application US/10278547
; Patent No. 6660834
; GENERAL INFORMATION:
APPLICANT: BILLING-MEDEL, PATRICCHEN, MAURICE COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN GORDON, BULIAN GRANADOS, EDWARD N.
HAYDEN, MARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-050-516-42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 679 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: No. 662741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRIA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LEENVVDREQI DFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KNAMAERWESRIYASEEDD 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SQSSDLLERERESVLRREQEVAEERRNALFPEVFSFTPDENSDQNSRSSSQASGITGSYS 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOSSDILLERERESVIRREQEVABERRNALFPEVFSPTPDENSDONSRSSSOASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; llarity 100.0%; Conservative 0
                                                                                                             P: BILLING-MEDEL, PATRICIA COHEN, MAURICE COLPITS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN GORDON, JULIAN COMMON COMM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  No. 6627414e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>..</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 3583; DB 2;
Pred. No. 5.6e-294;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
TOPOLOGY: linear;

MOLECULE TYPE: No. 6660834e;
SEQUENCE DESCRIPTION: SEQ ID
US-10-278-547-42
                                                                                                                                                                      Ś
                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                              Ş
                         δ
                                                                밁
                                                                                                   S
                                                                                                                                       밁
                                                                                                                                                                                                             맑
                                                                                                                                                                                                                                                                                 문
                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 679; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 42:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: CUNKNOWN>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: <UNKNOWN>
APPLICATION NUMBER: 08/828,855
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Chery'l L.
REGISTRATION NUMBER: 35,441
REGISTRATION NUMBER: 35,441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCE ADDRESS:
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
CTREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: TELECOMMUNICATION INFORMATION: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF
301
                               301
                                                                   241
                                                                                                                                         181
                                                                                                                                                                          181
                                                                                                                                                                                                               121
                                                                                                    241
                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                         1 MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                  LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                 MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                                                                                                                     VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STATE: IL
COUNTRY: USA
ZIP: 60064-3500
                       QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                             MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                                                                                                 VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                                                                      MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                       LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 679 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 3583; DB 2; llarity 100.0%; Pred. No. 5.6e-294; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  42:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                               679;
                                                                                                                                                                                                                                                                                                                                                                                                                            <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                              240
 360
                                                                     300
                                                                                                        300
                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
CURRENT APPLICATION NUMBER: US/09/nco TILING DATE:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7, Application US/09050516 6627414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KNAMAERWESRIYASEEDD 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KNAMAERWESRIYASEEDD 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SQSSDLLERERESVLRREQEVABERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SQSSDLLERERESVLRREQEVAEERRNALFFEVFSFTFDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                          100 Abbott Laboratories
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HODGES, STEVEN C. KLASS, MICHAEL R. KRATOCHVIL, JON D. ROBERTS-RAPP, LISA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RUSSELL, JOHN C.
STROUPE, STEPHEN D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BILLING-MEDEL, PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LISA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; MOLECULE TYPE: No. 6627414e US-09-050-516-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-278-547-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 47, Applicati
Patent No. 6660834
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 215; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEX:
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                   COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette

COMPUTER: IBM Compatible

OPERATING SYSTEM: DOS

SOFTWARE: FastSEQ for Windows Version 2.0

CURRENT APPLICATION DATA:

APPLICATION UNMBER: US/10/278,547

FILLING DATE: 23-Oct-2002

CLASSIFICATION DATA:

APPLICATION DATA:

APPLICATION DATA:

APPLICATION DATA:

APPLICATION DATA:

APPLICATION DATA:

APPLICATION NUMBER: US/09/050,516

FILLING DATE: <UNKnown>

APPLICATION NUMBER: 08/828,855

FILING DATE: 31-MAR-1997

APPLICATION DATE: 31-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH:
                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF
                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               465 MSPRHLSESSGKDLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NSRSSGASGITGSYSVSESPFFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALPPEVFSPTPDENSDQ 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                        CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/10278547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                        INVENTION: REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BILLING-MEDEL, PATRICIA COHEN, MAURICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GRANADOS, EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GORDON,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            single
                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       47:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>.</u>.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 1132; DB 2;
Pred. No. 1.2e-87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
```

ঠ 밁 र् 밁 S 밁 ঠ 밁 ঠ

199 601 109 541 541 481 481 421 421 361 361

US-09-050-516-47

Sequence 47, Patent No. 6

GENERAL INFORMATION:

PPLICANT:

GORDON, JULIAN

MARK

APPLICANT: COHEN, MAURIC
APPLICANT: COLPITYS, TRA
APPLICANT: FRIEDMAN, PAL
APPLICANT: GORDON, JULIA
APPLICANT: GORDON, JULIA
APPLICANT: HAYDEN, MARK
APPLICANT: HODGES, STEVE
APPLICANT: KLASS, MICHAE
APPLICANT: KRATOCHVIL,
APPLICANT: KRATOCHVIL,
APPLICANT: ROBERTS-RAPP,
APPLICANT: RUSSELL, JOHN
APPLICANT: STROUPE, STEIF
TITLE OF INVENTION: FRAN
APPLICANT: STROUPE,
APPLICANT: STROUPE,
APPLICANT: STROUPE,
APPLICANT: TIVENTION: FOR
TITLE OF INVENTION: FOR
TITLE OF INVENTION: TRAC
NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:

STREET: 100 Apport

ADDRESSEE:

TRACT

COUNTRY: USA ZIP: 60064-3500

USA

```
RESULT 5
US-09-050-516-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-278-547-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION
                                                                                                                                                                                                                                                     APPLICANT: KRATOCHVI
APPLICANT: ROBERTS-R
APPLICANT: RUSSELL,
APPLICANT: STROUPE,
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO: 47:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows
CURRENT APPLICATION DATA:
                                                                    ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                            CITY: Abbott Park
                                                                                                                                                                               STREET:
                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY: linear MOLECULE TYPE: No. 6660834e SEQUENCE DESCRIPTION: SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 600
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            585 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                525 VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   43,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 215 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/09050516
                                                                                                                                                                               E: Abbott Laboratories
                                                                                                                                                                                                                                                                                                                                                                                                                                                      BILLING-MEDEL, PATRI
COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
                                                                                                                                                                                                                                                     KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
VENTION: REAGENTS AND METHODS USEFUL
VENTION: FOR DETECTING DISEASES OF THE GASTROINTESTINAL
VENTION: TRACT
                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31.6%; Score 1132; I ilarity 100.0%; Pred. No. 1.: Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                  HODGES, STEVEN C. KLASS, MICHAEL R.
                                                                                                                                                                                                                                                                                                                                                                                                                                         GRANADOS, EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                        MARK
                                                                                                                                                                                                                                      49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 1132; DB 2; pred. No. 1.2e-87;
                    Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 6
US-10-278-547-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; MOLECULE TYPE: No. 6627414e
US-09-050-516-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 43, Applicati
Patent No. 6660834
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/8:
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                             GRANALUS, _
HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFULFOR DETECTING DISEASES OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: amino a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
les 36; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ENGTH:
                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: BILLING-MEDEL, PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3, Application US/10278547 6660834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     : 36 amino acids
                                             APPLICATION NUMBER: US/09/050,516 FILING DATE: <Unknown>
              APPLICATION NUMBER: 08/828,855 FILING DATE: 31-MAR-1997
                                                                                                                                                                                                                                                                       COUNTRY: USA
                                                                                                                                                                                                                                                                                                     CITY: Abbott Park
                                                                                                                                                                                                                                                         ZIP: 60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FRIEDMAN, PAULA N.
GORDON, JULIAN
GRANADOS, EDWARD N
HAYDEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COLPITTS, TRACI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       вingle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5.3%; Score 189; DB 2; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 us/09/050,516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08/828,855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           35,441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           43:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                           THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

Indels

0

Gaps

0;

```
; MOLECULE TYPE: NO. 6660834e
; SEQUENCE DESCRIPTION: SEQ ID NO: 43:
US-10-278-547-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 43:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                     COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/8:
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
LECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                         ZIP: 60064-3500
                                                                                                                                                     CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER: 35,4
REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION IMPORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 36 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ropology:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Becker,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/09050516
                                                                                                                                                                                                                                                                                                                                                                                                 3: Abbott Laboratories
100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BILLING-MEDEL, PATRICIA
COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GRANADOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BES, STEVEN C.
SS, MICHAEL R.
ROCHVIL, JON D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5.3%; Score 189; DB 2; 100.0%; Pred. No. 4.1e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STEPHEN D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REAGENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cheryl L
                                                                                                                08/828,855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>.</u>
                       6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                35,441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AND METHODS USEFUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-278-547-45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 45, Application Patent No. 6660834
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 35; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEX:
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                          TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 45:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: No. 6627414e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 35 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: «Unknown»
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                         OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                 TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEPAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         568 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/10278547
                         ENGTH: 35 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4.9%; Score 175; DB 2;
ilarity 100.0%; Pred. No. 6e-08;
Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BILLING-MEDEL, PATRICIA
COHEN, MAURICE
COLDITTS, TRACEY L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                            IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EDWARD N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   45:
                                                                                                                                                               6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2; Length 35;
```

밁

Matches

36;

US-09-050-516-45

Sequence 45, Patent No. 6

APPLICANT APPLICANT

PPLICANT

APPLICANT PPLICANT

PPLICANT

PPLICANT

APPLICANT APPLICANT:

ADDRESSEE:

```
TOPOLOGY: linear
;
MOLECULE TYPE: NO. 6660834e
;
SEQUENCE DESCRIPTION: SEQ ID
US-10-278-547-45
                                                                  δ
                                                                                                          밁
                                                                                                                                       ঠ
                                                                                                                                                                             밁
                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                        片
                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 9
US-09-252-991A-29419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-252-991A-29419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 29419
LENGTH: 1008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 29419, Application US/09252991A Patent No. 6551795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/09/252,991A CURRENT FILING DATE: 1999-02-18 PRIOR APPLICATION NUMBER: US 60/074,788 PRIOR FILING DATE: 1998-02-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                  653
                                                                                                            599
                                                                                                                                              334
                                                                                                                                                                                  539
                                                                                                                                                                                                                         307
                                                                                                                                                                                                                                                           492
                                                                                                                                                                                                                                                                                             253
                                                                                                                                                                                                                                                                                                                                 440 TQPAAARGAALRPPEAGAGGAF------RLLPGRPRTAAQAAPGRTGRGAPGRSRRVA 491
                                                                                                                                                                                                                                                                                                                                                                    213
                                                                                                                                                                                                                                                                                                                                                                                                          397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             162;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               568 ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS 602
 431
                                                                      381
                                                                                                                                                                                                                                                                                                                                                                                                                                            165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   35; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                            LSLITAPRRERGRPSLYVQRDIVQETQREEDH-----RREGLHVGRASTPD-----W
                                                                      VSEGPQPGLRRALSSDSILSPAPDARAAD----
                                                                                                                                                                                  PARTRORRRAGRRHGAGODLAVAGPRAPGKAGRAARHAGAGGDAHOPDPOLAGRGRALRP 598
                                                                                                                                                                                                                                                                                                                                                                     SSPARGTPAGTTPGASQAPKAFNKPHLANGHVVPIKPQVK-----
 PGTPQLEFSAFGAFGKPSSLSTAEAKA-----
                                    HQERHHQGRRRRPRAGGTASPVPDRHAAGEPPRRTLVAVPFPDARLARRRPP-----VR
                                                                                                            RSARAGPARRRPAPRLRPHR----RARPGADHLCPAATRRR--RAGQAAVPPADPRRGAE
                                                                                                                                                                                                                                                         AGLGRRRQPARLRPPPT-----QFPG-----SSGDPAARPARRTAALPARRPELDAD
                                                                                                                                                                                                                                                                                                                                                                                                          PGRRPAGQPAAGADRTDPPQSGPARS------ARPRPARRRRATGAAPG 439
                                                                                                                                                                                                                                                                                                                                                                                                                                            P------DHGDPRTPGPPRSTPLEENVVDREQIDFLAARQQFLSLEQANKGAPH 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PA-APAPARLVHRHPRRLRLRPDA----HRRL-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PTWALRPEDGEDKEMKTYRL--DAGDADPRRICDLERERWAVIQGQAVRKSSTVATLQGT 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAAYRTASGARAGIPRDPAPPRLQA--GDPAQRRARGERRRDVRTARRQRLAA--LHAGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PQTWPTDHRAQQGVQRQGVSYSVHAYTGQPSPRGLHSENRED-EGWQVYRLGARDAHQGR 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
                                                                                                                                                                                                                     ----LREQRGLRQATDHQELVEIPTRP------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                             GVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLAQER---EAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ON: AERUGINOSA FOR DIAGNOSTICS AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-02-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.9%; Score 175; DB 2; L
21.9%; Pred. No. 9e-06;
ive 57; Mismatches 290;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 175; pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ω
5
                                                                        ---PAPEVRKVNRIPPDAYQPYLS 430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>;</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 1008;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VRRGRGSRRPPVVRAGTGH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             232;
 -- ATSPKATMSP 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                         -LLTK 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TO PSEUDOMONAS
                                                                                                                                                                                                                                                           538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
US-09-976-594-726
                                                                    S
                                                                                                                                                                                 밁
                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                          片
                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
S
                                  밁
                                                                                                            밁
                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 726, Application US/09976594
Patent No. 6673549
GENERAL INFORMATION:
APPLICANT: Furness, Michael
APPLICANT: Burnbinder, Jenny
TITLE OF INVENTION: GENES EXPRESSED IN C3A LIVER CELL CULTURES OF THE REFERENCE: PA.0041 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 1143
SOFTWARE: PERL Program
SEQ ID NO 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -09-976-594-726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/240,409 PRIOR FILING DATE: 2000-10-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT FILING DATE: 2001-10-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: misc_feature
OTHER INFORMATION: Incyte ID No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Homo sapiens FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                            1268
                                                                                                                                                                                    1213
                                                                                                                                                                                                                                                             1155
                                                                                                                                                                                                                                                                                                                                     1101 SDEENREDOPEEF-----TATSGYTQSTIEISSEPTPMDEMSTPRDVMSDETNNEETES
                                                                                                                                                                                                                                                                                                                                                                                                        1044 YVMAVVDKAAEAGGAEEQYGFLTTPTKOLGAOSPGREPASSIHDET---LPGGSESEATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RDRAPGAGPQGPRGDRPARPGAQPHRDPRGAAQAAPGLLR-HAPAATPGRRRAQRPGAQL 824
   DHQELV---EIPTRPLLTKL---
                                                                                                                                                GTTPGASQAPKAFNKPH----LANGHVVPIKPQVKGVVREENKVRAVPTWASVQVV----
                                                                                                                                                                                                                         LEENVVDREQIDFLAARQQFLSLEQAN-----
                                                                                                                                                                                                                                                           PSQEFVNITKYESSLYSQEYSKPADVTPLNGFSEGSKTDATDGKDYNASASTISPPSS--
                                                                                                                                                                                                                                                                                               ERERW-----AVIQGQAVRKSSTVATLQGTPD------HGDPRTPGPPRSTP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                              YHLVCMGPEASGWGQDEPQTWPTDHRAQQGVQRQG--.VSYSVHAYTGQPSPRGLHS----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LFPEVFSPTPDENSDQNSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAP 628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QQAQVP--HVWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEER-----RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RHLSESSG-----KPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAP---DEP 517
                                    SVTGSAGHTPYYQSPTDEKSSHLPTEVIEKPPAVPVSFEF-----SDAKDENERASVS
                                                                                                              EKTPLGERSVNFSLTPNEIKVSAEAEVAPVSPEVTQEVVEEH--CASPEDKTLEVVSPSQ 1325
                                                                                                                                                                                  MEEDKFSRS----ALRDAYCSEVKASTTLDIKDSISAVSSEKVSPSKSPSLSPSPPSPL
                                                                                                                                                                                                                                                                                                                                                                    ---ENREDEGWQVYRLGARDAHQG--RPTWALRPEDGEDKEMKTYRLDAGDADPRRLCDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PGORPRIPHRPGOAGVRIPAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PGORKK----EOWYAGIN-PSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LPERQGAGVPDQLEGRRGRPQPDRGG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GOAGLPARHARRTDRRGSPGPAVLAVHLDARADRGRPAPARRRLRPADRRDPRPPRPGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PGLPHADREA-RRRGTPQSPGRAPAAVPAATDQGTGGLGTAAEERVHPVRRTQRGATRTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4.8%;
ilarity 20.4%;
Conservative 109
                                                                        -DDPGSLASVESPGTPKETPIEREIRLAQEREADLREQRGLRQAT 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 173; DB 2
Pred. No. 5e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6673549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4295277CD1
   --SLITAPRRERGRPSLYVQRDIVQETQR 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB_2; Length 2468;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    289;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels 270;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ---HRDPLRSLVEP-GGGE
                                                                                                                                                                                                                         -KGAPHSSPARGTPA 221
```

TREATED WITH STEROIDS

Gaps

. 1100

1154 139

1212

1378

1267

```
APPLICANT: Glot, Loic
ITITLE OF INVENTION: Protein-Protein Complexes and Method of Using Same
FILE REFERENCE: 15966-542
CURRENT APPLICATION NUMBER: US/09/538,092
CURRENT FILING DATE: 2000-03-29
PRIOR APPLICATION NUMBER: 60/127,352
PRIOR APPLICATION NUMBER: 60/127,352
PRIOR APPLICATION NUMBER: 60/178,965
PRIOR APPLICATION NUMBER: 60/178,965
PRIOR FILING DATE: 2000-02-01
NUMBER OF SEQ ID NOS: 1387
SOFTWARE: CuraPatSeqFormatter Version 0.9
SEQ ID NO 1135
LENGTH: 2468
TYPE: DDT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 11
US-09-538-092-1135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
    S
                                         밁
                                                                           δ
                                                                                                                         밁
                                                                                                                                                            S
                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                       .09-538-092-1135
                                                                                                                                                                                                                                                                                                      FEATURE:

NAME/KEY: misc_feature
LOCATION: (0)...(0)

OTHER INFORMATION: Polypeptide Accession Number P46821
                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1379 PMDEPVPDSESPIBKVLSPLRSPPLIGSESAYESPLSADDKASGRGA------
                                                                                                                           1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              574
                                           1101 SDEENREDOPEEF-----TATSGYTOSTIEISSEPTPMDEMSTPRDVMSDETNNEETES 1154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        362
    140
                                                                                                                                                                31 YHLVCMGPEASGWGQDEPQTWPTDHRAQQGVQRQG--VSYSVHAYTGQPSPRGLHS----
                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DTLSDVAPP---RDMSLYASLT-SEKVQSLEGEKLSPKSDISPLTPRESSPLYSPTFSD 1802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PV--DSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DYSPSDMQDSSLSHKIPPMEEPSYTQDNDLSELISVSQVEASPSTSSAHTPSQIASPLQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -FSPTPDENSDQNSR-----SSSQASGITGSYSVSE---SPFFSPIHLHSNVAWTVED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SRTPVQDHRSEQSSMSIEFGQES---PEQSLAMDFSRQSPDHPTVGAGVLHITENGPTEV 1687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGAPALRLQKSQSSDLLERERESVLRREQEVAEE--RRNALFPEV------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VVQTPTTFQETEMSPSKEECP-----RPMSISPPDFSPKTAK-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEGVAEDTYSHMEGVASVSTASVATSSFPEPTTDDVSP-SLHAEVGSPHSTEVDDSLSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -----AKAATS--PKAT---MSPRHLSESSGKPLSTK-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KTDDVEAMSSQPALALDERKLGDVSP--TQIDVSQFGSFKEDTKMSISEGTVSDKSATPV 1534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KVNRIPPDAYQPYL-----SPGTPQLEFSAFGAFGKPSSLSTAE----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EEKSGKQG-----SPDQVSPVSE-----MTSTSLYQDKQEGKSTDFAPIKEDFGQEK 1476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAP-----EVR 415
ERERW-----AVIQGQAVRKSSTVATLQGTPD-------HGDPRTPGPPRSTP 180
                                                                                 ---ENREDEGWQVYRLGARDAHQG--RPTWALRPEDGEDKEMKTYRLDAGDADPRRLCDL
                                                                                                                         YVMAVVDKAABAGGABEQYGFLTTPTKQLGAQSPGRBPASSIHDET---LPGGSESBATA 1100
                                                                                                                                                                                                        Conservative 109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QEASKPP--RGCPQANRGVVRWEYFRLRPLRFRAPD-EPQQAQVPHVWGWEV
                                                                                                                                                                                                                       4.8%;
                                                                                                                                                                                                      Score 173; DB 2; Length 2468;
Pred. No. 5e-05;
99; Mismatches 289; Indels 27
                                                                                                                                                                                                          Indels 270;
                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -ESPF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             454
```

```
S
                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
밁
                                 Ś
                                                                           밁
                                                                                                             S
                                                                                                                                                   片
                                                                                                                                                                                     δ
                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1213
                                                                                                                                                                                                                                 1594
                                                                                                                                                                                                                                                                                                           1535
                                                                                                                                                                                                                                                                                                                                                                                     1477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1155 PSQEFVNITKYESSLYSQEYSKPADVTPLNGFSEGSKTDATDGKDYNASASTISPPSS--
                                                                           1688
                                                                                                                                                     1631
1748 DTLSDVAPP---RDMSLYASLT-SEKVQSLEGEKLSPKSDISPLTPRESSPLYSPTFSD 1802
                                                                                                             574 -FSPTPDENSDONSR-----SSSOASGITGSYSVSE---SPFFSPIHLHSNVAWTVED 622
                                                                                                                                                                                                                                                                     482
                                                                                                                                                                                                                                                                                                                                               455
                                                                                                                                                                                                                                                                                                                                                                                                                          416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTTPGASQAPKAFNKPH----LANGHVVPIKPQVKGVVREENKVRAVPTWASVQVV----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LEENVVDREQIDFLAARQQFLSLEQAN-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DHQELV---BIPTRPLLTKL-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SVTGSAGHTPYYQSPTDEKSSHLPTEVIEKPPAVPVSFEF-----SDAKDENERASVS 1378
                                                                                                                                                   SRTPVQDHRSEQSSMSIEFGQES---PEQSLAMDFSRQSPDHPTVGAGVLHITENGPTEV 1687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PMDEPVPDSESPIEKVLSPLRSPPLIGSESAYESFLSADDKASGRGA------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EKTPLGERSVNFSLTPNEIKVSAEAEVAPVSPEVTQEVVEEH--CASPEDKTLEVVSPSQ 1325
                                                                           DYSPSDMQDSSLSHKIPPMEEPSYTQDNDLSELISVSQVEASPSTSSAHTPSQIASPLQE
                                                                                                                                                                                                                               VVQTPTTFQETEMSPSKEECP-
                                                                                                                                                                                                                                                                                                                                                                                   KTDDVEAMSSQPALALDERKLGDVSP--TQIDVSQFGSFKEDTKMSISEGTVSDKSATPV 1534
                                                                                                                                                                                                                                                                                                                                                                                                                        KVNRIPPDAYQPYL------SPGTPQLEFSAFGAFGKPSSLSTAE------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAP-----EVR 415
                                     PV--DSAPPGORKKEOWYAGINPSDGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                         AGAPALRLQKSQSSDLLERERESVLRREQEVAEE--RRNALFPEV-----
                                                                                                                                                                                                                                                                                                           DEGVAEDTYSHMEGVASVSTASVATSSFPEPTTDDVSP-SLHAEVGSPHSTEVDDSLSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                BEKSGKQG-----SPDQVSPVSE-----MTSTSLYQDKQEGKSTDFAPIKEDFGQEK 1476
                                                                                                                                                                                                                                                                       QEASKPP--RGCPQANRGVVRWEYFRLRPLRFRAPD-EPQQAQVPHVWGWEV 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ---ALRDAYCSEVKASTTLDIKDSISAVSSEKVSPSKSPSLSPSPPSPL 1267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DDPGSLASVESPGTPKETPIEREIRLAQEREADLREQRGLRQAT 317
                                                                                                                                                                                                                                                                                                                                               AKAATS--PKAT---MSPRHLSESSGKPLSTK---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SLITAPRRERGRPSLYVQRDIVQETQR 361
                                                                                                                                                                                                                                   RPMSISPPDFSPKTAK-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     --KGAPHSSPARGTPA 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -ESPF 1429
                                         679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1212
                                                                               1747
                                                                                                                                                                                                                                       1630
                                                                                                                                                                                                                                                                                                               1593
                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                              454
                                                                                                                                                                                                 573
```

```
Sequence 10237, Application US/09949016
Patent No. 6812339
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND
FILE REFERENCE: CL001307
CURRENT TAPLICATION NUMBER: US/09/949,016
CURRENT TILING DATE: 2000-01-0-20
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-30
PRIOR FILING DATE: 2000-10-03
PRIOR PRILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SEQ ID NO 10237
LENGTH: 2552
TYPE: PRT
US-09-949-016-10237
```

USES THEREOF

US-09-949-016-10237

```
US-09-050-516-46
                                                                                                                                                                                                Sequence 46, Application US/09050516 Patent No. 6627414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
                                                                                                                                                                             GENERAL INFORMATION:
                                                             APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                    1802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1589 DEGVAEDTYSHMEGVASVSTASVATSSFPEPTTDDVSP-SLHAEVGSPHSTEVDDSLSVS 164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1484 EEKSGKQG-----SPDQVSPVSE-----MTSTSLYQDKQEGKSTDFAPIKEDFGQEK 1530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1433 PMDEPVPDSESPIEKVLSPLRSPPLIGSESAYESFLSADDKASGRGA------ESPF 1483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1209 PSQEFVNITKYESSLYSQEYSKPADVTPLNGFSEGSKTDATDGKDYNASASTISPPSS--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1098 YVMAVVDKAAEAGGAEEQYGFLTTPTKQLGAQSPGREPASSIHDET---LPGGSESEATA 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  574 -FSPTPDENSDQNSR-----SSSQASGITGSYSVSE---SPFFSPIHLHSNVAWTVED 622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            222 GTTPGASQAPKAFNKPH----LANGHVVPIKPQVKGVVREENKVRAVPTWASVQVV---- 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181 LEENVVDREQIDFLAARQQFLSLEQAN-------KGAPHSSPARGTPA 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31 YHLVCMGPEASGWGQDEPQTWPTDHRAQQGVQRQG--VSYSVHAYTGQPSPRGLHS----
                                                                                                                                                                                                                                                                                                                                  DTLSDVAPP---RDMSLYASLT-SEKVQSLEGEKLSPKSDISPLTPRESSPLYSPTFSD 1856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGAPALRLQKSQSSDLLERERESVLRREQEVAEE--RRNALFPEV--------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DHQELV---EIPTRPLLTKL-------SLITAPRRERGRPSLYVQRDIVQETQR 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SVTGSAGHTPYYQSPTDEKSSHLPTEVIEKPPAVPVSFEF-----SDAKDENERASVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEEDKFSRS----ALRDAYCSEVKASTTLDIKDSISAVSSEKVSPSKSPSLSPSPPSPL 1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SDEENREDQPEEF----TATSGYTQSTIEISSEPTPMDEMSTPRDVMSDETNNEETES 1208
                                                                                                                                                                                                                                                                                                                                                                           PV--DSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VVQTPTTFQETEMSPSKEECP-------RPMSISPPDFSPKTAK-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KVNRIPPDAYOPYL------SPGTPQLEFSAFGAFGKPSSLSTAE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EKTPLGERSVNFSLTPNEIKVSAEAEVAPVSPEVTQEVVEEH--CASPEDKTLEVVSPSQ 1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ---ENREDEGWQVYRLGARDAHQG--RPTWALRPEDGEDKEMKTYRLDAGDADPRRLCDL 139
                                                                                                                                                                                                                                                                                                                                                                                                                         DYŚPSDMQDŚSLSHKIPPMEEPSYTQDNDLSELIŚVŚQVEAŚPSTŚSAHTPŚQIASPLQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SRTPVQDHRSEQSSMSIEFGQES---PEQSLAMDFSRQSPDHPTVGAGVLHITENGPTEV 174:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KTDDVEAMSSQPALALDERKLGDVSP--TQIDVSQFGSFKEDTKMSISEGTVSDKSATPV 1588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAP-----EVR 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ERERW-----AVIQGQAVRKSSTVATLQGTPD-------HGDPRTPGPPRSTP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----DDPGSLASVESPGTPKETPIEREIRLAQEREADLREQRGLRQAT 317
                                                             BILLING-MEDEL, PATRICIA COHEN, MAURICE COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                      GRANADOS, EDWARD N. HAYDEN, MARK
    HODGES,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ----QEASKPP--RGCPQANRGVVRWEYFRLRPLRFRAPD-EPQQAQVPHVWGWEV 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ----AKAATS--PKAT---MSPRHLSESSGKPLSTK-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 5.2e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              289;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              270;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1266
                                                                                                                                                                                                                                                                                                                                                                                                                         1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           454
                                                                                                                                                                                                                                                                                                                                                                           RESULT 14
US-10-278-547-46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-050-516-46
                                                                                                                                                                                                                                                                                                           Sequence 46, Applicati
Patent No. 6660834
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 32; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: RUSSELL,
APPLICANT: STROUPE,
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 33 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IDM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: PastSEQ for Windows Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY: USA
ZIP: 60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: Abbott Park
                                                                    TITLE
                                                                                                                                                                                                                                                                                           APPLICANT:
  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             621 EDPVDSAPPGQRKKEQWYAGINPSDGINSEVLE 653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
                                                                    õ
                                                                                                                                                                                                                                                                                                                                                         Application US/10278547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3: Abbott Laboratories
100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RUSSELL, JOHN C.
STROUPE, STEPHEN D.
VENTION: REAGENTS AND METHODS USEFUL
VENTION: FOR DETECTING DISEASES OF TI
VENTION: TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KRATOCHVIL, JON D. ROBERTS-RAPP, LISA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KLASS, MICHAEL R.
                                                                      INVENTION:
                                                                                                                                                                                                COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
                                                                                                                                                                                                                                                                    BILLING-MEDEL, PATRICIA COHEN, MAURICE
                                             KRATOCHVIL, JON D.
VENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF T
                                                                                                         HODGES, STEVEN C.
                                                                                                                                                         HAYDEN, MARK
                                                                                                                                                                                  GRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.8%;
97.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6627414e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/09/050,516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                35,441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08/828,855
                                                                                                                                                                                  EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LISA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       46:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6065.US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 171; DB 2;
Pred. No. 1.2e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .
P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                  THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

ঠ 밁 ঠ 문 ঠ 밁 á 밁 ঠ 밁 ঠ 밁 δ 밁 ঠ 문 Ş 밁 S 밁 S 밁 δ 밁 S 문

CORRESPONDENCE ADDRESS:
Abbott Laboratories

STREET: 100 Abbott Park Road CITY: Abbott Park

STATE: IL

```
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 30
LENGTH: 2843
TYPE: PRT
ORGANISM: human
US-10-092-138A-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: NO. 6660834e
SEQUENCE DESCRIPTION: SEQ ID NO: 46:
US-10-278-547-46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JS-10-092-138A-30
                                                          Query Match 4.7%; Score 168; DB 2; Length 2843; Best Local Similarity 21.1%; Pred. No. 0.00016; Matches 138; Conservative 82; Mismatches 272; Indels 16:
                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:

APPLICANT: Sato, Taka-Aki
TITLE OF INVENTION: METHOD OF PREPARING A PROTEIN ARRAY BASED ON
TITLE OF INVENTION: BIOCHEMICAL PROTEIN-PROTEIN INTERACTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 30, Application US/10092138A Patent No. 6743630
                                                                                                                                                                                                                                                                            FILE REFERENCE: 65923/JPW/PT
CURRENT APPLICATION NUMBER: US/10/092,138A
CURRENT FILING DATE: 2002-03-06
NUMBER OF SEQ ID NOS: 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 46:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: USA
ZIP: 6064-3500

ZIP: 6064-3500

COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0

CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/09/050,516
FILING DATE: <UNKNOWN>
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              621 EDPVDSAPPGQRKKEQWYAGINPSDGINSEVLE 653
1 EDSVDSAPPGORKKEOWYAGINPSDGINSEVLE 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 33 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4.8%;
97.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 171; DB 2; Length 33; Pred. No. 1.2e-07;
                                                                   Indels 162; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
```

ECE TWINE INCOME.	AI APPRING TERMINATE TO THE TRANSPORTED A MANAGEMENT TO THE TR	200	5
COTUNDESCESSIFICATED 2681	SOUNDED TO SEE STATE TO THE SECOND TO SECOND T	2 0 0	3 5
DBYDGABB 629			, ;
GTWRKIKENEFSPTNSTS 2627	SASSESSEKAKSEDEXHVNSISGTKOSKENOVSAKGTWRKIKENEFSPTNSTS	2575	子
VFSPTPDENSDQNSRS 588	Q-KSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRS	539	ş
HSSSLPRVSTWRRTGSSSSIL 2574	DIARSHSESPSRLPINRSGTWKREHSKHSSSLPRVSTWRRTGSSSSIL	2527	B
PDEPQQAQVPHVWGWEVAGAPALRL 538	QEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRL 538	482	Ş
GWRKLPPNLSPT-IEYNDGRPAKRH 252	-QAQTPVLSPSLPDMSLSTHSSVQAGGWRKLPPNLSPT-IEYNDGRPAKRH 2526	2478	<b>B</b>
AATSPKATMSPRHLSESSGKPLSTK 481 ;   ;  :	PDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLSTK 481	422	S
SFESLSPSSRPASPTRS 2477	ESDRSERPVLVRQSTFIKEAPSPTLRRKLEESASFESLSPSSRPASPTRS	2428	F
SILSPAPDARAADPAPEVRKVNRIP 421     :  :	EDHRREGLHVGRASTPDWVSEGPQPGLRRAL-SSDSILSPAPDARAADPAPEVRKVNRIP 421	363	S
OMNIGNGANKKVELSRMSSTKSSGS 242	NLTKOTGLSKNASSIPRSESASK-GLNOMNNGNGANKKVELSRMSSTKSSGS 2427	2377	용
TAPRRERGRPSLYVQRDIVQETQRE 362	READLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQRE 362	303	Ş
STASTKSSGSGKMSYTSPGRQMSQQ 2376	R-NSISPGRNG-ISPPNKISQLPRTSSPSTASTKSSGSGWSYTSPGRQMSQQ	2326	₽.
SLASVESPGTPKETPIEREIRLAQE 302	HVVPIKPQVKGVVRBENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLAQE 302	243	Ş
RSGSRDSTPSRPAQQPLSRPIQSPG 232	TATTSPRGAKPSVKSELSPVARQTSQIGGSSKAPSRSGSRDSTPSRPAQQPLSRPIQSPG 2325	2266	Дb
KAFNKPHLANG 242	PAGTTP	220	Ş
SSTSPVSKKGPPLKTPASKSPSEGQ 2265	NSEISGOMKQPLQAMMPSISRGRTMIHIPGVRNSSSSTSPVSKKGPPLKTPASKSPSEGQ	2206	DЬ
SLEQANKGAPHSSPARGT 219	TPLEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGT	179	QΥ
ESESKGIKGGKKVYKSLITĠKVRS 2205	SPFHLTPDQEEKPFTSNKGPRILKPGEKSTLETKKIESESKGIKGGKKVYKSLITGKVRS	2146	Вb
)HGDPRTPGPPRS 178	DPRRLC-DLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRS	132	Ş
CLSRQASSDSD-SILSLKSGISLG 214	SEHGL-SPDSENFDWKAIQEGANSIVSSLHQAAAAACLSRQASSDSD-SILSLKSGISLG 2145	2088	용

Search completed: March 3, 2006, 13:38:51
Job time: 93.2279 secs

Coldeny Manora agoda care

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OM protein - protein search, using sw model
                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                            Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Run on:
                                                                                                                                                        Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                     1867569 seqs, 417829326 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-646-873-42
3583
1 MDRVTRYPILGIPQAHRGTG......HKNAWAERWESRIYASBEDD 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     March 3, 2006, 14:09:14; Search time 298.259 Seconds (without alignments) 951.209 Million cell updates/sec
Published Applications AA Main:*

1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*

2: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*

3: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*

4: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*

5: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*

6: /cgn2_6/ptodata/1/pubpaa/US11_PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                             1867569
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

2254	22221111111988765432 22221887888888888888888888888888888888	Result No.
189 189 189 180 179.5	3583 11383 11132 11132 11132 11132 1132 205 205 205 205 205 205 205 205 205 20	Score
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1100 31.6 31.6 31.6 6.6 6.6 5.7 7 5.7 7	Query Match
3149 5008		Length
اعممم	α α ω α α α α α α α ω α ω α ω α α α α α	3 - 8
US-10-278-547-43 US-10-278-547-43 US-10-646-873-43 US-10-408-765A-2326 US-10-051-874-166	-10-278-547 -10-278-547 -10-278-547 -10-278-547 -10-278-547 -10-0087-192 -10-019-993 -10-719-993 -10-719-993 -10-719-993 -10-719-993 -10-719-993 -10-719-993 -10-719-993 -10-719-993 -10-719-993	ID US-09-050-516-42
Sequence 43, Appl Sequence 43, Appl Sequence 2326, Ap Sequence 2326, Ap Sequence 166, App	442, 57445,	- !

177 4.9 3262 5 US-10-840-512-161 177 4.9 3262 5 US-10-840-512-117 175 4.9 1321 5 US-09-050-516-45 175 4.9 35 4 US-10-278-547-45 175 4.9 35 4 US-10-278-547-45 177 4.9 4322 4 US-10-437-93-104793 173 4.8 2468 4 US-10-437-963-104793 173 4.8 2468 5 US-10-489-740-216 173 4.8 2468 5 US-10-489-740-216 171 4.8 33 3 US-10-450-763-46995 171 4.8 33 3 US-10-278-547-46 171 4.8 33 4 US-10-278-547-46 171 4.8 2367 5 US-10-485-005A-6 170 5 4.8 2367 5 US-10-485-005A-6 169 4.7 2527 4 US-10-408-765A-2462 169 4.7 1265 4 US-10-408-765A-2462 168 4.7 2843 2 US-08-681-219-32	<b>4</b> 5	44	43	42	41	40	39	38	37	36	35	ω 4	ω ω	32	31	30	29	2
3262 5 US 3262 5 US 3262 5 US 327 6 US 35 4 US 4322 4 US 2468 5 US	168	168	169	169	170.5	171	171	171	173	173	173	174	175	175	175	176.5	177	1/1
5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	4.7	4.7	4.7	4.7	4.8	4.8	4.8	4.8	8	4.8	4. 8	4.9	4.9	4.9	4.9	4.9	4.9	. 4
5 US-10-840-512-161 US-10-840-512-161 3 US-09-050-516-45 4 US-10-278-547-45 4 US-10-278-547-45 4 US-10-437-963-104793 4 US-10-489-740-216 5 US-10-489-740-216 5 US-10-489-740-216 5 US-10-489-740-216 4 US-10-278-547-46 4 US-10-278-547-46 5 US-10-278-547-46 4 US-10-408-765A-66 5 US-10-408-765A-66 4 US-10-408-765A-866 4 US-10-408-765A-866 4 US-10-408-765A-866 5 US-10-408-765A-866 6 US-10-408-765A-866 6 US-10-408-765A-866 9 US-10-408-765A-866 9 US-10-408-765A-866	2843	1265	2715	2527	2367	ω G	ω U	33	2519	2468	2468	4322	35	35	35	1321	3262	7070
US-10-840-512-16 US-10-840-512-117 US-90-050-516-45 US-10-905-516-45 US-10-278-547-45 US-10-278-547-45 US-10-479-63-104793 US-10-755-889-615 US-10-489-740-216 US-10-489-740-216 US-10-489-740-216 US-10-489-740-46 US-10-486-873-46 US-10-486-873-46 US-10-486-873-46 US-10-486-873-46 US-10-488-765A-2462 US-10-408-765A-2462 US-10-408-765A-2462 US-10-408-765A-2462 US-10-408-765A-2462 US-10-408-765A-2462	ผ	4	4.	4	v	4	Α	w	u	v	4	4	4	4.	ω	v	v	4
	US-08-681-219-32	US-10-437-963-138094	US-10-408-765A-866	US-10-408-765A-2462	US-10-485-006A-6	US-10-646-873-46	US-10-278-547-46	US-09-050-516-46	US-10-450-763-46995	US-10-489-740-216	US-10-755-889-615	US-10-437-963-104793	US-10-646-873-45	US-10-278-547-45	US-09-050-516-45	US-10-840-512-117	US-10-840-512-161	00-T0-7/2-20T-4
	32, App1	138094,	866, APE	2462, AF	6, Appli	46, App1	46, Appi	46, App1	46995, A	216, App		104793,	45, App1	45, App1	45, App1	117, App	161, ADD	22.

## ALIGNMENTS

RESULT 1

	; INFORMATION FOR SEQ ID NO: 42:	
	; TELEFAX: 847/938-2623	
	H	
	; TELECOMMUNICATION INFORMATION:	
	; REFERENCE/DOCKET NUMBER: 6065.US.P1	
	TRATION NUMBER:	
	: NAME: Recker Cheryl I.	
	3	
	A:	
	; CLASSIFICATION:	
	APPLICATION NUMBER: US/09/050,516	
	LICATION DATA:	
	FastSEO	
	CO.	
	₩	
	TYPE . Di	
	Δ.	
	8	
	ĸ	
	F	
	Abbott Park	
	00 Abbott	
	ADDRESSEE: Abbott Laboratories	
	PONDENCE ADDRESS	
•	유유	
•	QF	
GASTROINTESTINAL	OF INVENTION:	
	SEF	
	: STROUPE, STEPHEN D.	
	••	
	: ROBERTS-	
	KRATOCI	
	: KLASS, MICHAEL	
	HODGES	
	HAYDEN, MARK	
	GRANADOS	
	GORDON, J	
	FRIEDMAN,	
	••	
	APPLICANT: BILLING-MEDEL, PATRICIA	
	GENERAL INFORMATION:	
	uszőő10010904	
	: Semience 42. Application US/09050516	
	US-09-050-516-42	

```
RESULT 2
US-10-278-547-42
                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-050-516-42
                                                                                Sequence 42, Application US/10278547
Publication No. US20030082619A1
GENERAL INFORMATION:
APPLICANT: BILLING-MEDEL, PATI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 100.
Best Local Similarity 100.
Matches 679; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: amino acida STRANDEDNESS: single TOPOLOGY: linear MOLECULE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                   661
                                                                                                                                                                                                                                              109
                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                           KNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                               VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                  PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                   SQSSDILERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                           SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                       KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                                           PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                               REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
GRANADOS, EDWARD N.
HAYDEN, MARK
                                                                                 BILLING-MEDEL, PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No. US20010010904Ale
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 3583; DB 3; 100.0%; Pred. No. 7.9e-235;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                   679
                                                                                                                                                                                            679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                660
                                                                                                                                                                                                                                                                                                                             600
                                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                         660
                                                                                                                                                                                                                                                                                                   600
                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                     맑
                                                                              Ś
                                                                                                                                                                밁
                                                                                                                                                                                         S
                                                                                                                                                                                                                                           Ś
                       S
                                                                                                            맑
                                                                                                                                 S
                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local :
                                                                                                            181
    301
                            301
                                                      241
                                                                                                                                      181
                                                                                                                                                                 121
                                                                                                                                                                                            121
                                                                                 241
                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                61
```

```
TOPOLOGY: linear;

MOLECULE TYPE: No. US20030082619A1e
SEQUENCE DESCRIPTION: SEQ ID NO: 42:
US-10-278-547-42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 42:
SEQUENCE CHARACTERISTICS:
LEMGTH: 679 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/09/050,516
FILING DATE: «Unknown»
APPLICATION NUMBER: 08/628,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6665.US.P1
TELEPHONE: 847/935-1729
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FRATSEQ for Windows Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPBASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                       MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                   QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                            NGHVVPIKPQVKGVVRBENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                   LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                    VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STATE: IL
COUNTRY: USA
QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                  NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                      LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                        MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                                                                                                                                                          VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                                                                                                                                                MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/10/278,547 FILING DATE: 23-Oct-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ဝူ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INVENTION: REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF TH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HODGES, STEVEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 3583; DB 4; 100.0%; Pred. No. 7.9e-235;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                          360
                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                    300
                                                                                                                              300
                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
  360
                                                                                                                                                                        240
                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

S 밁 S 밁 S

8 밁 ঠ 밁 ঠ 밁

밁

0;

Gaps

```
RESULT 3
US-10-646-873-42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 42, Application US/10646873
Publication No. US20040043406A1
GENERAL INFORMATION:
APPLICANT: BILLING-MEDEL, PATR.
COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
                                                                                                    APPLICATION NUMBER: US/10/646,873
FILING DATE: 22-Aug-2003
CLASSIFICATION: <UNKnown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: 30-MAR-1998
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTESEQ for Windows
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REEDHRREGLHVGRASTPDWVSEGPOPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VSESPFFSPIHLHSNVAWTVEDFVDSAPFGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SQSSDLLERERESVLRREQEVABERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                           ZIP: 60064-3500
                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HAVDEN, MAKA
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATCCHVIL, JON D.
OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE
TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             679
                                                                                                                                                                                                                                                                                      Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: linear

MOLECULE TYPE: No. US20040043406Ale
SEQUENCE DESCRIPTION: SEQ ID NO: 42:
US-10-646-873-42
                                                                   US-09-050-516-47
; Sequence 47, Application US/09050516
; Patent No. US20010010904A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    믕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 딹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                            묽
                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 42:
SEQUENCE CHARACTERISTICS:
       APPLICANT:
                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LEENVVDREQIDFLAARQOFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 679 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NGHVVPIKPQVKGVVRBENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                         KNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                           VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSSVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                    KQEASKPPRGCPQANRGVVRWEYFRLRPLRPRAPDEPQQAQVPHVWGWEVAGAPALRLQK 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                     KNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                         VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                              SOSSDILLERERESVILREQEVALERRNALFPEVFSPTPDENSDONSRSSSOASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                 SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                  KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PPDAYOPYLSPGTPOLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
     BILLING-MEDEL, PATRICIA COHEN, MAURICE COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
                                                                                                                                                                                                     679
                                                                                                                                                                                                                                        679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 3583; DB 4;
Pred. No. 7.9e-235;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
```

420

360

480 420

480

660 600 600 540 300 300 180 180 120 120 60 60

GRANADOS,

JULIAN S, EDWARD N.

```
🙏 ; Sequence 47, Application US/10278547
             RESULT 5
US-10-278-547-47
                                                                                                                                                   片
                                                                                                                                                                                Ś
                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                  ş
                                                                                                                                                                                                                                                                                                                                                                                                                    ; TOPOLOGY: 1i; MOLECULE TYPE: US-09-050-516-47
                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:

PRIOR APPLICATION NUMBER: 08/828,85

FILING DATE: 31-MAR-1997

ATTORNEY/AGENT INFORMATION:

NAME: Becker, Cheryl L.

REGISTRATION NUMBER: 35,441

REFERENCE/DOCKET NUMBER: 6065

TELECOMMUNICATION INFORMATION:

TELEPHONE: 847/335-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: ITTLE OF INVENTION: ITTLE OF INVENTION: ITTLE OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/^^
FILING DATE:
CLASSIT-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                      Local Similarity
nes 215; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 215 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                     585
                                                                                                                   645
                                                                                                                                                                                                                                           525 VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                         465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                                                                                    181
                                                                                                                                                                                                                      61 VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
                                                                                                                                                                                                                                                                                      ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Abbott Park
                                                                                                      DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679
                                                                                                                                                      NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
                                                                                                                                                                         NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
                                                                                    DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                        MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RUSSELL, JOHN C.
STROUPE, STEPHEN D.
VENTION: REAGENTS AND METHODS USEFUL
VENTION: FOR DETECTING DISEASES OF THE GASTROINTESTINAL
VENTION: TRACT
EQUENCES: 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HAYDEN,
HODGES,
                                                                                                                                                                                                                                                                                                                                                    31.6%; Score 1132; DB 3; llarity 100.0%; Pred. No. 6.7e-69; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                       No. US20010010904A1e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08/828,855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6065.US.P1
                                                                                    215
                                                                                                                                                                                                                                                                                                                                                                                     Length 215;
                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                        120
                                                                                                                                                      180
                                                                                                                                                                                       644
                                                                                                                                                                                                                                                       584
                                                                                                                                                                                                                                                                                      60
```

```
S
                                                                    밁
                                                                                                           Ś
                                                                                                                                                           밁
                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                  仔
                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-278-547-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Publication No. US20030082619A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOPTWARE: FASTSOR FOR WINDOWS Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION OATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: 4Unknown>
PRIOR APPLICATION NUMBER: US/09/050,516
FILING DATE: 31-MAR-1997
ATTORNEY, BOTON COMPATION:
MARCE BOTON TIMORMATION:
                                                                                                                                                                                                                                                                                                                                     / Match 31.6%; Score 1132; DB 4; Local Similarity 100.0%; Pred. No. 6.7e-69; nes 215; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: No. US20030082619Ale
SEQUENCE DESCRIPTION: SEQ ID NO: 47:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEPAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: BILLING-MEDEL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 49
                             645
                                                                       121
                                                                                                                                                                                              525 VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVABERRNALFPEVFSPTPDENSDQ 584
                                                                                                                                                                                                                                                                                     465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH 524
                                                                                                                                                              61
                                                                                                                                                                                                                                                  H
                                                                                                  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 644
                                                                       NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
                                                                                                                                                           VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 120
                                                                                                                                                                                                                                                  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH 60
DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: Becker, Cheryl L. REGISTRATION NUMBER: 35,441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 215 amino acide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COHEN, MAURICE COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GRANADOS, EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HAYDEN, MARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                Length 215;
                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                       Gaps
```

밁

181 DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215

US-10-646-873-47

Sequence 47, Application US/10646873 Publication No. US20040043406A1 GENERAL INFORMATION:

APPLICANT: BILLING-MEDEL, PATRICIA

FRIEDMAN, PAULA N. COHEN, MAURICE

JULIAN MARK EDWARD N.

GRANADOS,

MICHAEL R.

```
밁
                           ş
                                                                  용
                                                                                                 ş
                                                                                                      465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                               525 VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 584
61
                                                                  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
 120
                                                                       60
                                                                                                        524
```

US-10-646-873-47

TOPOLOGY: linear MOLECULE TYPE: No. US20040043406Ale SEQUENCE DESCRIPTION: SEQ ID NO: 47:

TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:

TYPE: amino acids

STRANDEDNESS: single

APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1

TELECOMMUNICATION INFORMATION:

TELEFAX: 847/938-2623

TELEPHONE:

847/935-1729

SOFTWARE: FastSEQ for Windows Version CURRENT APPLICATION DATA:

COMPUTER: IBM Compatible OPERATING SYSTEM: DOS

APPLICATION NUMBER: US/10/646,873 FILING DATE: 22-Aug-2003

COMPUTER

TER READABLE FORM: MEDIUM TYPE: Diskette

60064-3500

PRIOR APPLICATION DATA:

CLASSIFICATION:

<Unknown>

APPLICATION NUMBER: US/09/050,516 FILING DATE: 30-MAR-1998

CORRESPONDENCE ADDRESS:
Abbott Laboratories

T: 100 Abbott Park Road Abbott Park

NUMBER OF SEQUENCES: 49

TITLE OF INVENTION:

Query Match Best Local Similarity Matches 215;

Conservative

.

100.0%;

Score 1132; DB 4; Pred. No. 6.7e-69; Mismatches

Length 215; Indels

0

31.6%;

```
TOCHVIL, JON D.
TION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             무
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-106-698-4761
                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-106-698-4761
                                                                                                                                                                                                              US-10-029-386-33676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 4761, Application US/10106698 Publication No. US20030109690A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 167; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Pat
SEQ ID NO 4761
                                                                                                                                                                Sequence 33676, Application US/10029386 Publication No. US20030194704A1
                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/10/106,698
CURRENT FILING DATE: 2002-03-27
PRIOR APPLICATION NUMBER: PCT/US00/26524
PRIOR FILING DATE: 2000-09-28
PRIOR APPLICATION NUMBER: US 60/157,137
PRIOR FILING DATE: 1999-09-29
                   APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K.
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR
TITLE OF INVENTION: EXPRESSION ANALYSIS TWO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 8564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TILE REFERENCE: PA005P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Ruben
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: MISC_FEATURE
LOCATION: (55)
OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
NAME/KEY: MISC FEATURE
LOCATION: (116)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR FILING DATE: 1999-11-03
                                                                                                                           APPLICANT: Penn,
CURRENT APPLICATION NUMBER: US/10/029,386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DRGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TLE OF INVENTION: Colon and Colon Cancer Associated Polynucleotides and Polypeptide:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ENGTH: 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US 60/163,280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         645 DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       585 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           488 PRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQKSQSSDLL 547
                                                                                                                                                                                                                                                                                                                               668 WESRIYASEEDD 679
                                                                                                                                                                                                                                                                                                                                                                              101
                                                                                                                                                                                                                                                                                                                                                                                                      608 SPIHIHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRHKNAMAER 667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        548
                                                                                                                                                                                                                                                                                              161 WESRIYASEEDD 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                               41 ERERESVLRREQEVXEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVSESPFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PatentIn Ver. 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVSESPFF 607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
                                                                                                                                                                                                                                                                                                                                                                            SPIHLHSNVAWTVEDXVDSAPPGORKKEQWYAGINPSDGINSEVLEAIRVTRHKNAMAER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                 TION: EXPRESSION ANALYSIS TWO ABOMICA-X-2
                                                                                                                           Sharron G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 839; DB 4;
Pred. No. 4.1e-49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 172;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                     160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100
```

-QQAQVPHVWGWEVA 531

691

471 576

621

573

```
CURRENT FILING DATE: 2001-12-20

NUMBER OF SEQ ID NOS: 34288
SOFTWARE: Annomax Sequence Listing Engine
SEQ ID NO 33676
LENGTH: 43
TYPE: PRT
ORGANISM: Homo Bapiens
FEATURE:
OTHER INFORMATION: MAP TO AC004030.1
OTHER INFORMATION: EXPRESSED IN HELA, SI
US-10-029-386-33676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/10/087,192
CURRENT FILING DATE: 2002-03-01
PRIOR APPLICATION NUMBER: US 09/747,377
PRIOR FILING DATE: 2000-12-22
PRIOR APPLICATION NUMBER: US 09/798,586
PRIOR FILING DATE: 2001-03-02
NUMBER OF SEQ ID NOS: 2059
SOFTWARE: PASSSEQ for Windows Version 4.0
SEQ ID NO 1320
                                                S
                                                                                                밁
                                                                                                                                          ક
                                                                                                                                                                                    밁
                                                                                                                                                                                                                    र्
                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 910; TYPE: PRT; ORGANISM: Homo sapiens US-10-087-192-1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 9
US-10-087-192-1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1320, Application US/10087192 Publication No. US20020182586A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: MOTTIS, DAVIG W.
APPLICANT: Engelhard, Eric K.
TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS
TITLE OF INVENTION: CANCER
FILE REFERENCE: 529452000122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 155;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                388
                                                                                                                                                                                                                               226
                                                                                                                                                                                                                                                                       336
                                                                                                                                                                                                                                                                                                                                                             276
                                                                                                                                                                                                                                                                                                                                                                                                      159
                   472
                                                           334 LSLITAPRR------ERGRPSLYVQRDIVQETQREEDHRREGLHVGRASTPDWVSEGP 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100 RDAHQGRPTWALRPEDGEDKEMKTYRLDAGDADP-RRLCDLERERWAVIQGQAVRKSSTV 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ch 6.6%; Score 236; DB 4; 1 Similarity 100.0%; Pred. No. 6.4e-09; 43; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                 PPRSTPLEENVVDR-----EQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTP--
                                                                                                                                                                                                                                                                                                                                                          AAKWWNPPQEKTIEEQLDEEHLESHKKYKERKERRAQQEQLLLQKQLQQQQQQPPSQLCT 335
                                                                                                                                                                                                                                                                         APASSHERASMIDKAKEDIVTEQIDFSAARKQFQLMENSRQAV----AKGQ---STPRL
                                                                                                                                                                                                                                                                                                                                                                                                                                              RAFHEDKKPSKLFEDDEHEKEQYCIR----KVRPSEEMLELEKERRELIRSQAVKKNPGI 275
                 DGEFTSARAVLTVVKDDDHGILDQFSRSVNVSLTQEELDSGLDELSVRSQDTT-----
                                                                                                                                          PGSLASVESPGTPKETPIEREIRLAQEREADLRE--QRGLRQATDHQELVEIPTRPLLTK 333
                                                                                                                                                                                        FSIKPFYRPLGSVNSDKPLTNP------RPPSVGGPPEDSGASAAKGQKS-----
                                                                                                                                                                                                                             -----GASQAPKAFNKPHLANGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDD 275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5.7%;
19.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7%; Score 205; DB 4; Length 910;
9%; Pred. No. 4.4e-05;
105; Mismatches 228; Indels 292;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Engine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIGNAL =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           vers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0.42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 43;
                                                                                                                                                                                                                                                                                                                                                                                                      --LOGTPDHGDPRTPG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                   225
                                                                                                                                                                                                                                                                                                                                                                                                      174
                                                                                                     471
                                                                                                                                                                                        431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Ghosh, Soumitra S.
APPLICANT: Fahy, Eoin D.
APPLICANT: Tang, Bing
APPLICANT: Zhang, Bing
APPLICANT: Zhang, Bradford W.
APPLICANT: Taylor, Steven W.
APPLICANT: Marnock, Dale E.
APPLICANT: Warnock, Dale E.
TITLE OF INVENTION: TARGETS FOR THERAPEUTIC INTERVENTION
TITLE OF INVENTION: IDENTIFIED IN THE MITOCHONDRIAL PROTEON
FILE REFERENCE: 660088.465
CURRENT APPLICATION NUMBER: US/10/408,765A
CURRENT APPLICATION NUMBER: OS03-04-04
NUMBER OF ERG ID NOS: 3077
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 2018
LENGTH: 913
                                                                                                                                                                  밁
                              S
                                                                            밁
                                                                                                                      S
                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 10
US-10-408-765A-2018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
밁
                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                          ; ORGANISM: Homo sapiens
US-10-408-765A-2018
                                                                                                                                                                                                                                                                                                                                         Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 2018, Application US/10408765A Publication No. US20040101874A1
                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                    y Match 5.7%; Score 205; DB 4; 1
Local Similarity 19.9%; Pred. No. 4.4e-05;
hes 155; Conservative 105; Mismatches 228;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     386
391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             848 EDYETHKSKRRERMDDSSYTSKLLSCKVTSEVLEATRVNRRKSALALRWEAGIYANQEEE 907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               512
FSIKPFYRPLGSVNSDKPLTNP------RPPSVGGPPEDSGASAAKGQKS-----
                                                                                   APASSHERASMIDKAKEDIVTEQIDFSAARKQFQLMENSRQAV----AKGQ---STPRL
                                                                                                                                                                                                                                                     RAFHEDKKPSKLFEDDEHEKEQYCIR----KVRPSEEMLELEKERRELIRSQAVKKNPGI
                                                                                                                                                                                                                                                                                               RDAHQGRPTWALRPEDGEDKEMKTYRLDAGDADP-RRLCDLERERWAVIQGQAVRKSSTV 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DPVDSAPPGQRKK--EQWYAGINPSDGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TAPGKIEKVKPPPSPTTEGPSLQPDLAPEEAAG-----TQRP-----KNLMQTLM 847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GPFKLRSRKQRTLSMIEEEIRAAQEREEELKRQRQVLQSTQSPRTKNA--PSLPSRTCYK 802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAPALRIQKSQSSDLLERERESVLRREQEVALER-----RNALFPEV-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RGPPQPLPAVQPSGPINMEETRPEGSYFSKYSEAAELRSTASLLATQESDV------MV 744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GVSKSFSDHGFYSPSSTLGDSPLVDDPLEYQAGLLVQNAIQQAIAEQVDKAVSKTSRDGA 636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ----FSAFGAFGKPSSLSTA----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QPGLRRALSSDSILSPAPDARAADPAPEVRKVNRIPPDAYQPYLSPGTPQLE-----
                                                                                                                      PPRSTPLEENVVDR-----EQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTP--
                                                                                                                                                                    AAKWWNPPQEKTIEEQLDEEHLESHKKYKERKERRAQQEQLLLQKQLQQQQQQPPSQLCT 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----FSPTPDENSDONSRSSSOASGITGSYSVSESPFFSPIHLHSNVAWTVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RAPDEP-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EQQG-PEATVEEAEAAAFGSEKPQSMFEPPQVSSPVQEKRDVLP----KILPAEDRALRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ESSGKPLSTKQEAS------KPPR-GCP-QANRGVVRWEYFRLRP-----LRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ---VLETLSNDFSMDNISDSGASN----ETTNALQENSLADFSLPQTPQTDNPSEGRGE
                                     GASQAPKAFNKPHLANGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDD 275
                                                                                                                                                                                                            -----LQGTPDHGDPRTPG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ----EAKAATSPKA-TMSPRHLS
                                                                                                                                                                                                                                                                                                                                                                                Length 913;
                                                                                                                                                                                                                                                                                                                                         Indels 292;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROTEOME
```

Gaps

278

174

390

434

```
Sequence 746, Application US/10719993

Publication No. US20040265849A1

GENERAL INFORMATION:
APPLICANT: CARGILI, Michele et al.

TITLE OF INVENTION: GENETIC POLYMORPHISMS ASS
TITLE OF INVENTION: ALZHEIMER'S DISEASE, MET
FILE REFERENCE: CL001496

CURRENT APPLICATION NUMBER: US/10/719,993

CURRENT FILING DATE: 2003-11-24

NUMBER OF SEQ ID NOS: 55342

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 748

LENGTH: 923

TYPE: PRT
ORGANISM: Homo sapiens

US-10-719-993-748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 11
US-10-719-993-748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ई
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                     밁
           밁
                                   S
                                                                       밁
                                                                                                   र्
                                                                                                                                                                 გ
                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 155; Conserv
                                                                                                                                                                       :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              622 DPVDSAPPGQRKK--EQWYAGINPSDGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           748
                                           175
                                                                         289
                                                                                                        159
                                                                                                                                                                    100 RDAHOGRPTWALRPEDGEDKEMKTYRLDAGDADP-RRLCDLERERWAVIQGQAVRKSSTV 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GVSKSFSDHGFYSPSSTLGDSPLVDDPLEYQAGLLVQNAIQQAIAEQVDKAVSKTSRDGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QPGLRRALSSDSILSPAPDARAADPAPEVRKVNRIPPDAYQPYLSPGTPQLE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PGSLASVESPGTPKETPIEREIRLAQEREADLRE--QRGLRQATDHQELVEIPTRPLLTK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EDYETHKSKRRERMDDSSYTSKLLSCKVTSEVLEATRVNRRKSALALRWEAGIYANQEEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TAPGKIEKVKPPPSPTTEGPSLQPDLAPEEAAG-----TQRP-----KNLMQTLM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GPFKLRSRKQRTLSMIEEEIRAAQEREEELKRQRQVLQSTQSPRTKNA--PSLPSRTCYK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAPALRLOKSOSSDLLERERESVLRREGEVAEER-----RNALFPEV-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RGPPQPLPAVQPSGPINMEETRPEGSYPSKYSEAAELRSTASLLATQESDV-----MV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EQQG-PEATVEEAEAAAFGSEKPQSMFEPPQVSSPVQEKRDVLP----KILPAEDRALRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ESSGKPLSTKQEAS-------KPPR-GCP-QANRGVVRWEYFRLRP-----LRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ----FSAFGAFGKPSSLSTA-------EAKAATSPKA-TMSPRHLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ---VLETLSNDFSMDNISDSGASN----ETTNALQENSLADFSLPQTPQTDNPSEGRGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DGEFTSARAVLTVVKDDDHGILDQFSRSVNVSLTQEELDSGLDELSVRSQDTT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LSLITAPRR-----ERGRPSLYVQRDIVQETQREEDHRREGLHVGRASTPDWVSEGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PGALETPSAAGSQGNT-----ASQGKEGPYSEPSKRG------PLSKLWAE
                                           PPRSTPLEENVVDR----EQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTP--
                                                                                                                                     RAFHEDKKPSKLFEDDEHEKEOYCIR----KVRPSEEMLELEKERRELIRSQAVKKNPGI
             APASSHERASMIDKAKEDIVTEQIDFSAARKQFQLMENSRQAV-----AKGQ---STPRL
                                                                       AAKWWNPPQEKTIEEQLDEEHLESHKKYKERKERRAQQEQLLLQKQLQQQQQPPSQLCT
                                                                                                                                                                                                   Conservative 105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ----FSPTPDENSDONSRSSSOASGITGSYSVSESPFFSPIHLHSNVAWTVE
                                                                                                                                                                                                 5.7%; Score 205; DB 5; Length 923;
19.9%; Pred. No. 4.5e-05;
ative 105; Mismatches 228; Indels 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----QQAQVPHVWGWEVA 531
                                                                                                                                                                                                                                                                                                                                                                                                                          ASSOCIATED WITH METHODS OF DETE
                                                                                                         ---LQGTPDHGDPRTPG----
                                                                                                                                                                                                    Indels 292;
                                                                                                                                                                                                                                                                                                                                                                                                                           DETECTION AND
                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                             USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             474
                400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  679
                                             225
                                                                                                         174
                                                                                                                                        288
                                                                                                                                                                                                                                                                              APPLICANT: CARGILL, Michele et al.
TITLE OF INVENTION: GENERIC POLYMORPHISMS AS:
TITLE OF INVENTION: ALZHEIMER'S DISEASE, ME'
FILE REFERENCE: CL001496
CURRENT APPLICATION NUMBER: US/10/719,993
CURRENT FILING DATE: 2003-11-24
NUMBER OF SEQ ID NOS: 55342
SOFTWARE: FAST-SEQ for Windows Version 4.0
SEQ ID NO 749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
 S
                              밁
                                                          ঠ
                                                                                            밁
                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-719-993-749
                                                                                                                                                                                                                      US-10-719-993-749
                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 749, Application US/10719993
Publication No. US20040265849A1
GENERAL INFORMATION:
                                                                                                                                                          Matches 155;
                                                                                                                                                                       Best Local Similarity
                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                   LENGTH: 923
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        438
175 PPRSTPLEENVVDR-----EQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTP--
                                289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RAPDEP-----
                              AAKWWNPPQEKTIEEQLDEEHLESHKKYKERKERRAQQEQLLLQKQLQQQQQQPPSQLCT 348
                                                                                                                                                          Conservative
                                                                                                                                                         105;
```

```
401 FSIKPFYRPLGSVNSDKPLTNP------RPPSVGGPPEDSGASAAKGQKS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          538 ---VLETLSNDFSMDNISDSGASN-----ETTNALQENSLADFSLPQTPQTDNPSEGRGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        334 LSLITAPRR-----ERGRPSLYVQRDIVQETQREEDHRREGLHVGRASTPDWVSEGP 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DGEFTSARAVLTVVKDDDHGILDQFSRSVNVSLTQEELDSGLDELSVRSQDTT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ------GASQAPKAFNKPHLANGHVVPIKPQVKGVVRBENKVRAVPTWASVQVVDD 275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GVSKSFSDHGFYSPSSTLGDSPLVDDFLEYQAGLLVQNAIQQAIAEQVDKAVSKTSRDGA 649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QPGLRRALSSDSILSPAPDARAADPAPEVRKVNRIPPDAYQPYLSPGTPQLE----- 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EQQG-PEATVEEAEAAAFGSEKPQSMFEPPQVSSPVQEKRDVLP----KILPAEDRALRE 704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ESSGKPLSTKQEAS------KPPR-GCP-QANRGYVRWEYFRLRP-----LRF 511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -----FSAFGAFGKPSSLSTA--------EAKAATSPKA-TMSPRHLS 471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PGALETPSAAGSQGNT-----ASQGKEGPYSEPSKRG-----PLSKLWAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PGSLASVESPGTPKETPIEREIRLAQEREADLRE--ORGLROATDHQELVEIPTRPLLTK 333
EDYETHKSKRRERMDDSSYTSKLLSCKVTSEVLEATRVNRRKSALALRWEAGIYANQEEE
                                                 DPVDSAPPGQRKK--EQWYAGINPSDGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679
                                                                                                                              TAPGKIEKVKPPPSPTTEGPSLQPDLAPEEAAG-----
                                                                                                                                                                                   ------FSPTPDENSDQNSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVE 621
                                                                                                                                                                                                                                                                                                               GAPALRLOKSQSSDLLERERESVLRREQEVABER-----
                                                                                                                                                                                                                                                                                                                                                                                 RGPPQPLPAVQPSGPINMEETRPEGSYFSKYSEAAELRSTASLLATQESDV-----MV
                                                                                                                                                                                                                                                         GPFKLRSRKQRTLSMIEEEIRAAQEREEELKRQRQVLQSTQSPRTKNA--PSLPSRTCYK
                                                                                                                                                                                                                                                                                                                                                                                                                                          -----QQAQVPHVWGWEVA 531
                                                                                                                                                                                                                                                                                                                         -----RNALFPEV-----
                                                                                                                                     -----KNLMQTLM
      920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             444
                                                                                                                                                                                                                                                                   815
                                                                                                                                                                                                                                                                                                                                                                                               757
                                                                                                                                     860
                                                                                                                                                                                                                                                                                                                               573
```

100 RDAHQGRPTWALRPEDGEDKEMKTYRLDAGDADP-RRLCDLERERWAVIQGQAVRKSSTV RAFHEDKKPSKLFEDDEHEKEQYCIR----KVRPSEEMLELEKERRELIRSQAVKKNPGI 288 5.7%; Score 205; DB 5; 19.9%; Pred. No. 4.5e-05; tive 105; Mismatches 228; ASSOCIATED METHODS OF Length 923; ---LQGTPDHGDPRTPG----Indels 292; WITH DETECTION AND USES Gaps THEREOF 174 33

```
Ş
                                                  밁
                                                                                        Ś
                                                                                                                                                                                                             LENGTH: 1103
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-719-993-745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 13
US-10-719-993-745
                                                                                                                                  Query Match
Best Local S
Matches 155
                                                                                                                                                                                                                                                                                 Sequence 745, Application US/1071993

Publication No. US20040265849A1

GENERAL INFORMATION:
APPLICANT: CARGILL, Michele et al.
APPLICANT: CARGILL, Michele et al.
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: ALZEBIMER'S DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CL001496

FULL REFERENCE: CL001496

CURRENT APPLICATION NUMBER: US/10/719,993

CURRENT PILING DATE: 2003-11-24

NUMBER OF SEQ ID NOS: 55342

SOFTWARE: Fast-SEQ for Windows Version 4.0

SEQ ID NO 745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     349
                    159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        401
                                                        413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  485
                                                                                                                                    155;
                                                                                                                                                        Similarity
                                                        RAFHEDKKPSKLFEDDEHEKEQYCIR----KVRPSEEMLELEKERRELIRSQAVKKNPGI 468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAPGKIEKVKPPPSPTTEGPSLQPDLAPEEAAG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GPFKLRSRKQRTLSMIEEEIRAAQEREEELKRQRQVLQSTQSPRTKNA--PSLPSRTCYK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LSLITAPRR-----ERGRPSLYVQRDIVQETQREEDHRREGLHVGRASTPDWVSEGP 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FSIKPFYRPLGSVNSDKPLTNP-----RPPSVGGPPEDSGASAAKGQKS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EDYETHKSKRRERMDDSSYTSKLLSCKVTSEVLEATRVNRRKSALALRWEAGIYANQEEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DPVDSAPPGORKK--EQWYAGINPSDGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAPALRLOKSOSSDLLERERESVLRREQEVAEER----
                                                                                              RDAHQGRPTWALRPEDGEDKEMKTYRLDAGDADP-RRLCDLERERWAVIQGQAVRKSSTV 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----FSPTPDENSDONSRSSSOASGITGSYSVSESPFFSPIHLHSNVAWTVE 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RAPDEP-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DGEFTSARAVLTVVKDDDHGILDQFSRSVNVSLTQEELDSGLDELSVRSQDTT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -----GASQAPKAFNKPHLANGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDD 275
                      AT---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RGPPQPLPAVQPSGPINMEETRPEGSYFSKYSEAAELRSTASLLATQESDV-----MV 757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EQQG-PEATVEEAEAAAFGSEKPQSMFEPPQVSSPVQEKRDVLP----KILPAEDRALRE 704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ESSGKPLSTKQEAS------KPPR-GCP-QANRGVVRWEYFRLRP-----LRF 511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GVSKSFSDHGFYSPSSTLGDSPLVDDPLEYQAGLLVQNAIQQAIAEQVDKAVSKTSRDGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----EAFGAFGKPSSLSTA-------EAKAATSPKA-TMSPRHLS 471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ---VLETLSNDFSMDNISDSGASN----ETTNALQENSLADFSLPQTPQTDNPSEGRGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QPGLRRALSSDSILSPAPDARAADPAPEVRKVNRIPPDAYQPYLSPGTPQLE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PGALETPSAAGSQGNT-----ASQGKEGPYSEPSKRG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PGSLASVESPGTPKETPIEREIRLAQEREADLRE--QRGLRQATDHQELVEIPTRPLLTK 333
                                                                                                                                    Conservative
                                                                                                                                5.7%; Score 205; DB 5; I
19.9%; Pred. No. 5.7e-05;
tive 105; Mismatches 228;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ---TORP-----KNLMOTLM
                                                                                                                                                                      Length 1103;
                --LOGTEDHGDERTEG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ----RNALFPEV----
                                                                                                                                    Indels 292;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----PLSKLWAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QQAQVPHVWGWEVA 531
                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    537
                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 14
US-10-756-149-4788
; Sequence 4788, Application US/10756149
; Publication No. US20050181375A1
                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                    ; ORGANISM: Homo Sapiens
US-10-756-149-4788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                           APPLICANT: Aziz, Natasha
APPLICANT: Zlotnik, Albert
APPLICANT: Zlotnik, Albert
TITLE OF INVENTION: NOVEL METHODS OF DIAGNOSIS OF METASTATIC CANCER, COMPOSITIONS AND
TITLE OF INVENTION: METHODS OF SCREENING FOR MODULATORS OF METASTATIC CANCER
FILE REFERENCE: file
CURRENT APPLICATION NUMBER: US/10/756,149
CURRENT FILING DATE: 2004-01-12
NUMBER OF SEQ ID NOS: 5818
SOFTWARE: Patentin version 3.2
SEQ ID NO 4788
                                                        Query Match 5.7%; Score 205; DB 5; I Best Local Similarity 19.9%; Pred. No. 5.7e-05; Matches 155; Conservative 105; Mismatches 228;
                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                          LENGTH: 1103
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         469
100 RDAHQGRPTWALRPEDGEDKEMKTYRLDAGDADP-RRLCDLERERWAVIQGQAVRKSSTV 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 334 LSLITAPRR-----ERGRPSLYVQRDIVQETQREEDHRREGLHVGRASTPDWVSEGP 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                581 FSIKPFYRPLGSVNSDKPLTNP------RPPSVGGPPEDSGASAAKGQKS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DPVDSAPPGQRKK--EQWYAGINPSDGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TAPGKIEKVKPPPSPTTEGPSLQPDLAPEEAAG-----TQRP-----KNLMQTLM 1040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAPALRIQKSQSSDILERERESVIRREQEVAEER------RNALFPEV-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RGPPQPLPAVQPSGPINMEETRPEGSYFSKYSEAAELRSTASLLATQESDV------MV 937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QPGLRRALSSDSILSPAPDARAADPAPEVRKVNRIPPDAYQPYLSPGTPQLE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PGALETPSAAGSQGNT-----ASQGKEGPYSEPSKRG------PLSKLWAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APASSHERASMIDKAKEDIVTEQIDFSAARKQFQLMENSRQAV-----AKGQ---STPRL 580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAKWWNPPQEKTIEEQLDEEHLESHKKYKERKERRAQQEQLLLQKQLQQQQQQPPSQLCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EDYETHKSKREEMDDSSYTSKLLSCKVTSEVLEATRVNRRKSALALRWEAGIYANQEEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----FSPTPDENSDONSRSSSOASGITGSYSVSESPFFSPIHLHSNVAWTVE 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GPFKLRSRKQRTLSMIEEEIRAAQEREEELKRQRQVLQSTQSPRTKNA--PSLPSRTCYK 995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RAPDEP-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EQQG-PEATVEEAEAAAFGSEKPQSMFEPPQVSSPVQEKRDVLP----KILPAEDRALRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ESSGKPLSTKQEAS----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GVSKSFSDHGFYSPSSTLGDSPLVDDPLEYQAGLLVQNAIQQAIAEQVDKAVSKTSRDGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ----FSAFGAFGKPSSLSTA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ---VLETLSNDFSMDNISDSGASN----ETTNALQENSLADFSLPQTPQTDNPSEGRGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DGEFTSARAVLTVVKDDDHGILDQFSRSVNVSLTQEELDSGLDELSVRSQDTT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PGSLASVESPGTPKETPIEREIRLAQEREADLRE--QRGLRQATDHQELVEIPTRPLLTK 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -----GASQAPKAFNKPHLANGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PPRSTPLEENVVDR-----EQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTP--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -KPPR-GCP-QANRGVVRWEYFRLRP----LRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -----EAKAATSPKA-TMSPRHLS 471
                                                                                              Length 1103;
                                                            Indels 292;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -QQAQVPHVWGWEVA 531
                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      624
```

RESULT US-10-6 Seque GENEE APPI TITI TITI TITI FRILL CURR CURR CURR FRILL PRILL PRIL	음 성	9	ફ	음 성	음 성	ß \$	용	ફ	용 성	음 성	밁	ર્ફ	8 8	? ;	\$ <b>\$</b>	ğ	Ş	
ESULT 15 S-10-631-467- Sequence 604 Publication GENERAL INFO APPLICANT: TITLE OF IN PRIOR APPLI PRIOR APPLI PRIOR FILIN PRIOR FILIN PRIOR FILIN PRIOR FILIN PRIOR OF OF SOFTWARE: P SOFTWARE: P SEQ ID NO 60 LENGTH: DIT TYPE: PIT ORGANISM: IS-10-631-467-														•				
-467-6 elon N elon N elon N infor ANT: G OF INV EFEREN T PILING APPLICA APPLICA PILING FIL	622 1041	996	574	532 938	512 885	472 830	770	438	386 718	334 665	625	276	581	) (	175	469	159	413
15 sil-467-604 space 604, Application US/10631467 lcation No. US20050208496A1 RAL INFORMATION: LICANT (Genox Research Inc. LE OF INVENTION: Method for testing for broncheal asthma, or chronic Reference: 3462.1005-000 E REFERENCE: 3462.1005-000 E RENT APPLICATION NUMBER: US/10/631,467 RRNT FILING DATE: 2003-07-31 OR APPLICATION NUMBER: JP 2003-077212 OR FILING DATE: 2003-03-20 OR FILING DATE: 2003-03-20 OR FILING DATE: 2002-08-06 SER OF SEQ ID NOS: 2086 TWARE: Patentin version 3.1 ID NO 604 BER OF SEQ ID NOS: 2086 TWARE: PAT GANISM: Homo sapiens 631-467-604	DPVDSAPPGQRKKBQWYAGINPSDGINSEVLBAIRVTRHKNAMAERWESRIYASEEDD : : :	TAPGKIEKVKPPPSPTTEGPSLOPDLAPEEAAGTQRPKNLMQTLM	)ENSDQNSRSSS	GAPALRLOKSQSSDLLERERESVLRREQEVAEERRNALFPEV	RAPDEPQAQVPHVWGWEVA	ESSGKPLSTKQEASKPPR-GCP-QANRGVVRWEYFRLRPLRF	QNAIQQAIAEQVDKAVSKTSRDG	FSAFGAFGKPSSLSTA	QPGLRRALSSDSILSPAPDARAADPAPEVRKVNRIPPDAYQPYLSPGTPQLE	LSLITAPRRERGRESLYVQRDIVQETQREEDHRREGLHVGRASTPDWVSEGP  :	LETPSAAGSQGNTASQGKEGPYSEPSKRGPLSKLWAE	PGSLASVESPGTPKETPIEREIRLAQEREADLREQRGLRQATDHQELVEIPTRPLLTK		CACOA E A ROTA DE LA TOTA DEL	PPRSTPLEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTP	AAKWWNPPQEKTIEEQLDEEHLESHKKYKERKERRAQQEQLLLQKQLQQQQQPPSQLCT	ATLQGTPDHGDPRTPG	RAPHEDKKPSKLPEDDEHEKEQYCIRKVRPSEEMLELEKERRELIRSQAVKKNPGI
obstructive	679 1100	1040	621	573 995	531 937	511 884	829	471	437 769	385 717	664	333	624	275	225 580	528	174	468

50	ļ	Ś	망	ð	DЬ	S	뫄	Ş	망	δ	망	Ş	В	Ş	皮	Sy.	Ф	Ş	DB DB	Ş	Db	ફ	D D	Ş	皮	Ś	Query M Best Lo Matches
	2	AERWESRIY	996 TAPGKIEKVKPPPSPTTEGPSLQPDLAPEEAAGTQRPKNLMQTLM 1040	574FSPTPDENSDQNSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVE 621	938 GPFKLRSRKORTLSMIEBEIRAAQERBEBLKRORQVLQSTQSPRTKNAPSLPSRTCYK 995	532 GAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEV 573	885 RGPPQPLPAVQPSGPINMEETRPEGSYFSKYSEAAELRSTASLLATQESDVMV 937	512 RAPDEP	830 EQQG-PEATVEEAEAAAAFGSEKPQSMFEPPQVSSPVQEKRDVLPKILPAEDRALRE 884	472 ESSGKPLSTKQEASKPPR-GCP-QANRGVVRWEYFRLRPLRF 511	770 GVSKSFSDHGFYSPSSTLGDSPLVDDPLEYQAGLLVQNAIQQAIAEQVDKAVSKTSRDGA 829	438EAKAATSPKA-TMSPRHLS 471	718VLETLSNDFSMDNISDSGASNETTNALQENSLADFSLPQTPQTDNPSEGRGE 769	386 QPGLRRALSSDSILSPAPDARAADPAPEVRKVNRIPPDDAYQPYLSPGTPQLE 437	665 DGEFTSARAVLTVVKDDDHGILDQFSRSVNVSLTQEELDSGLDELSVRSQDTT 717	334 LSLITAPRRERGRPSLYVQRDIVQETQREEDHRREGLHVGRASTPDWVSEGP 385	625 PGALETPSAAGSQGNTASQGKEGPYSEPSKRGPLSKLWAB 664	276 PGSLASVESPGTPKETPIEREIRLAQEREADLREQRGLRQATDHQELVEIPTRPLLTK 333	581 FSIKPFYRPLGSVNSDKPLTNP	226GASQAPKAFNKPHLANGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDD 275	529 APASSHERASMIDKAKEDIVTEQIDESAARKQFQLMENSRQAVAKGQSTPRL 580	175 PPRSTPLEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTP 225	469 AAKWWNPPQEKTIEEQLDEEHLESHKKYKERKERRAQQEQLLLQKQLQQQQQQPPSQLCT 528	159 ATLQGTPDHGDPRTPG 174	413 RAFHEDKKPSKLFEDDEHEKEQYCIRKVRPSEEMLELEKERRELIRSQAVKKNPGI 468	100 RDAHQGRPTWALRPEDGEDKEMKTYRLDAGDADP-RRLCDLERERWAVIQGQAVRKSSTV 158	ry Match 5.7%; Score 205; DB 5; Length 1103; t Local Similarity 19.9%; Pred. No. 5.7e-05; ches 155; Conservative 105; Mismatches 228; Indels 292; Gaps 33;

Search completed: March 3, 2006, 14:18:08 Job time : 302.258 secs

Coopy High Box

š

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                  Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein -
                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                         pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                       145.5
145.5
145.5
                                                                                                                                                                                                                                                                                                                                                                                  Score
                                                                                                                                                                                                                      148.5
                                                                                                                                                                                                                                                                                             156.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-646-873-42
3583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    135346 seqs, 20000420 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     March
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Published Applications AA_New:*

| / cgn2 6/ptodata/1/pubpaa/US06 NEW PUB.pep:*
| / cgn2 6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*
| / cgn2 6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*
| / cgn2 6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*
| / cgn2 6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
| cgn2 6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
| / cgn2 6/ptodata/1/pubpaa/US11_NEW_PUB.pep:*
| / cgn2 6/ptodata/1/pubpaa/US11_NEW_PUB.pep:*
| / cgn2 6/ptodata/1/pubpaa/US11_NEW_PUB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MDRVTRYPILGIPQAHRGTG.....HKNAMAERWESRIYASBEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep:
                                                                                                                                                                                                                                                                                                                                                                                    Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3, 2006, 14:10:51;
                                          864
870
1360
2801
2896
2896
2896
3256
3256
3256
3256
3256
3256
                                       US-11-114-906-2
US-11-24-368A-305
US-11-124-368A-305
US-11-124-368A-305
US-11-124-368A-304
US-11-124-367A-434
US-11-124-367A-442
US-11-124-367A-442
US-11-124-367A-442
US-11-124-367A-443
US-11-124-367A-443
US-11-124-367A-443
US-11-124-367A-443
US-11-124-367A-443
US-11-124-367A-443
US-11-124-367A-443
US-11-124-367A-443
US-11-124-367A-443
US-11-134-367A-443
US-11-330-773-630
                                                                                                                                                                                                                                                                                                                                                                                     ä
                                                                                                                                                                                                                                                                                                            US-11-087-099-2391
US-11-080-991-54
US-11-186-284-49
                                                                                                                                                                                                                                                                                                                                                        US-11-169-041-167
                                                                                                                                                                                                                                                   US-11-114-906-
                                                                                                                                                                                                                                                                 US-11-114-906-6
                                                                                                                                                                                                                                                                                                                                                                                                                                SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Search time 32.3333 Seconds (without alignments)
420.009 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                     Description
                                                                                                                                                                                                                     Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                 Sequence
Sequence
                                          Sequence
Sequence
Sequence
                                                                                                     Sequence
Sequence
                                                                                                                                              Sequence
Sequence
                                                                                                                                                                                         Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                           Sequence 167, App
Sequence 2391, Ap
                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                               Sequence
                                                                                     Sequence
                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                            54, Appl
49, Appl
                                                                                                                                                                                                                     242, App
8, Appli
6, Appli
4, Appli
2, Appli
14, Appli
                                                                                                                                                                             433,
306,
RESULT 1
US-11-169-041-167
US-11-169-041-167
Sequence 167, Applicat
Publication No. US2000
GENERAL INFORMATION:
                                                                                                                 á
                                                                                                                                                                             S
                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                    밁
                                닭
                                                          Ś
                                                                                          밁
                                                                                                                                                   片
                                                                                                                                                                                                                                                                                                                                               Best
                                                                                                                                                                                                                                                                                                                                Matches 159;
                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                          341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/11169041
o. US20060019284A1
```

45	44	43	42	41	40	39	38	37	36	ω 5	ω 4	<b>ω</b> ω	32	31	ω 0	29	28	27	26	
133	133	134	134	134.5	134.5	135	135.5	136	137	137	137	137.5	137.5	137.5	137.5	141	142	142	144	,
3.7	3.7	3.7	3.7	ω . 8	3.8	ა . 8	ა . გ	بر 8	3. 8	3. 8	ა	3. 8	မ	3.8			4.0	•	4.0	
1500	1138	1596	1026	2344	1823	1271	1618	2339	2157	2108	2102	895	889	789	776	1075	2011	1377	1439	
σ	σ	7	7	σ	σ	σ	σ	7	σ	σ	0	7	7	7	7	7	7	σ	7	
US-10-330-773-85	US-10-509-422-4	US-11-060-005-4	US-11-169-041-205	US-10-330-773-627	US-10-995-561-988	US-10-770-726-46	US-10-984-645-2	US-11-096-281-11	US-10-995-561-991	US-10-995-561-989	US-10-995-561-990	US-11-114-906-18	US-11-114-906-20	US-11-114-906-22	US-11-114-906-24	US-11-100-640-12	US-11-080-991-56	US-10-821-234-1070	US-11-124-368A-291	
Sequence 85, Appl		Sequence 4, Appli	Sequence 205, App	•	Sequence 988, App	Sequence 46, Appi	Sequence 2, Appli	Sequence 11, Appi	-	686	Sequence 990, App		•	Sequence 22, Appl	•		•	10/0,	O	

## ALIGNMENTS

; TYPE: PRT ; ORGANISM: Homo sapiens US-11-169-041-167 NUMBER OF SEQ ID NOS: 527
SOFTWARE: PatentIn version 3.2
SEQ ID NO 167
LENGTH: 863 APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: IDENTIFICATION OF POLYNUCLEOTIDES FOR PREDICTING ACTIVITY OF
TITLE OF INVENTION: COMPOUNDS THAT INTERACT WITH AND/OR MODULATE PROTEIN TYROSINE
TITLE OF INVENTION: KINASES AND/OR PROTEIN TYROSINE KINASE PATHWAYS IN LUNG CANCER
TITLE OF INVENTION: CELLS CURRENT APPLICATION NUMBER: US/11/169,041
CURRENT FILLING DATE: 2005-66-28
PRIOR APPLICATION NUMBER: 60/584,405
PRIOR FILING DATE: 2004-06-30 FILE REFERENCE: 10001 NP Match 4.4%; Local Similarity 22.8%; 204 EQANKGAPHSSPA---RGTPAGT--TPGASQAPKAFNKPHLANGHVVPIKPQVKGVVREE 145 AVIQGOAVRKSSTVATLQGTPDHGDPRTPGP-PRSTPLEENVVDREQIDFLAARQQFLSL 311 RGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRP-----SLYVQRDIVQETQREEDH 365 389 SSSPGPPSQDSRQVENGGTEEVAQPSPTASLESKPYNPFE--259 NKVRAVPTWASVQV-----VDDPGSLASVES-PGTPKETPIEREIRLAQEREADLREQ 310 269 -----GPKASPEARPQIPTKPRVPGKLQELAS--PPAGRPTP------86 NREDEGWQVYRLGARDAHQGRPTWALRPE-DGEDKEMKTYRLDAGDADPRRLCDLERERW 144 32 HLVCMGPEASGWGQDEPQTWPTDHRAQQ-----GVQRQGVSYSVHAYTGQPSPRGLHSE 85 HCARLGPGTRSGTRPGPFSQPKQQHQQQLAEDAKDVPGGGPSSS------APAGAEAD 268 ----NGRLHELPVPKPRGTPKPSEGTPAPRKDP-----PWIT---LVQAEPKKKPAPLPP 388 Conservative ---APRKASESTT 65; Score 158; DB 7; Length 863; Pred. No. 0.0028; Mismatches -PAPPTPRPRSSLQQENLVEQAGSSSLV-----231; Indels 242; EEEEDKEE-Gaps 258 340 203 303

```
; NUMBER OF SEQ ID NOS: 1
; SEQ ID NO 2391
; LENGTH: 2479
; TYPE: PRT
; ORGANISM: Neurospora c
US-11-087-099-2391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 2
US-11-087-099-2391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
 밁
                              S
                                                                       밁
                                                                                                           δ
                                                                                                                                                문
                                                                                                                                                                             5
                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                         뭐
                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 2391, Application US/11087099
Publication No. US20060041961A1
GENERAL INFORMATION:
APPLICANT: Abad, Mark S. et al.
TITLE OF INVENTION: Genes and Uses for Plant Improvement
FILE REFERENCE: 38-21(53450)B EP
CURRENT APPLICATION NUMBER: US/11/087,099
CURRENT FILING DATE: 2005-03-22
                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 132; Conserv
   1043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               687
                                        374
                                                                                                                                                                                      271
                                                                                                                                                                                                                                                                                                  822
                                                                                                                                                                                                                                                                                                                                                                                                          114 EDGEDKEMKTYRL-----DAGDADPRRLCDL-----ERERWAVIQGQAVRKSSTVATL 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RPAPRAPSASPLALHASRLSHSEPPSATPSPALSVESLSSESASQTAGAELLEPPA----
                                                                                                                                                                                                                                                               SPARGTPAGTTPGASQAPKAFNKPHLANGHVVPIKPQVKGVVR--EENKVR-AVPTWASV 270
                                                                                                                                                                                                                                                                                                                                                                           QEAEDKAREELRLLELVRQDAVKAEKAKAAELGNWNVAVNEKAAAAERRRIVREAEEATL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GELVEPRVEQ-----MPQASPG-----LAP-RTRGSSGPQPAK-----PCSGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAP 534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KVNRIPPDAYQPYL-SPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RRE-----GLHVGRASTPDWVSEGPQPGLR-RALSSDSILSPAPDARAADPAPEVR 415
                                                                                                HQELVEIPTRPLLTKL--SLITAPRRERGRPSLY---VQRDIVQETQREEDHRREGLHVG 373
                                                                                                                                                                                    QVVDDPGSLASVESPGTPKETPIEREIRLAQEREADLREQRGLRQA------TD
                                                                                                                                                                                                                                                                                                    AKTTVEKTPKTFTPGGKLTSVAASRGDVSRTRDNHKFVPFLKTSKVAAARSEAAKDADRK
                                                                                                                                                                                                                                                                                                                                     QGTPDHGDPRT---PGPPRSTPLEENVVDREQ----IDFLAARQQFLSLEQANKGAPHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMDTIERRLDAL --- BHRGVLLEEKLRGGLNEGREDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      --NPFNRKPSPAASPA---TKKATKGSKPVRPPAPGHGFPLIKRKVQADQYI-PEEDIHG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PTPL-----LLVGDRSPV----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ----VPKSSSEPAVHAPGTP-----GNPVSLSTNSSLA-----
                                      RASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADP-----APEVRKVNRIPPDAYQ 426
                                                                                                                                                                                                                         HAAAGAEKRO---ALEAAGAEKRKEIKKGNOOP-----GVVKASEANVPKSADPAISKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EV-----LEAIRVTRHKNA-MAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQ-----RKKEQWYAGINPSDGINS
                                                                           FEANVPKPADPVISKSPEASIPTPLTEVEKPRNFYETIRRREWEAQREEAKKTD-----
                                                                                                                                                  PEASIPTAL TEAEKPRNFYET-----IRRREWEAQREEAKKKDEAEKIIKPPEADISKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                               4.4%; Score 158; DB 7; Length 2479;
20.9%; Pred. No. 0.011;
7ative 87; Mismatches 222; Indels 192;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             crassa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -EAPAAP----SLATSP--ALGHPESTPKSLHPWYGITPTSSPKTKK 476
-EAEKIIKP-PKADISKPSEANVHKAPE--XINK-PPEA--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -PSPGSSSPQLQVKSSCKE-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SS----
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   532
                                                                                                                                                                                      318
                                                                                                                                                                                                                                                                                                                                                                           821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              563
                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
```

```
APPLICANT: Veiby, Petter Ole
TITLE OF INVENTION: COMPOSITIONS, KITS, AND METHODS FOR
TITLE OF INVENTION: LDENTIFICATION, ASSESSMENT, PREVENTION, AND
TITLE OF INVENTION: AND OVARIAN CANCER
FILE REFERENCE: MRI-039
CURRENT APPLICATION NUMBER: US/11/080,991
CURRENT FILING DATE: 2005-03-11
PRIOR APPLICATION NUMBER: US/10/176,847
PRIOR APPLICATION NUMBER: US/10/176,847
PRIOR PILING DATE: 2002-06-21
NUMBER OF SEQ ID NOS: 112
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 54
LENGTH: 2828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 3
US-11-080-991-54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                           뭐
                                                                                                                                           밁
                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                   S
                                                                                               Ś
                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-11-080-991-54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 54, Application US/11080991 Publication No. US20050266437A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 167;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1120
310 QRGLRQATDHQELVEIPTRPLLTKLSLITA---PRRE------
                                                                                                                                                                                   190
                                                                                                                                                                                                                                                                                                                                                                                          658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                427
                                                                                                                                                                                                                            773
                                                                                                                                                                                                                                                                                                                                                  109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10 LGIPQAHRGTGLV---LDGDTSYTYHLVCMGPEASGWGQDEPQTWPTD---HRA----QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LAIPEAHLSWILPNRRIINDLANTSH-VYMLPNGT---LSIPKVQVSDSGYYRCVAVNQQ
                                                                                                                                                                                                                            MANKQINPERWADILAKVRGKNLPKGTEVPPL-----IKTTSPPS------
                                                                                                                                                                                                                                                                                                          RLLHPKDQEVFLKTKDDAINGDKKAKKGRRKLKLWKHSEKEPETNVAEGRRVFESRRRIN
                                                                                                                                                                                                                                                                                                                                              WALRPEDGE-----DKEMKTYRL-----DAGDADPRRLCDLER---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             THPVPAKEKPQPPAQKKPQDPVKKQPQSQAQKK 1313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PYLSPGTPQLEFSAFGAFGKPSSLST---AEAKAATSPKATMSPRHLSESSGKP-----
                                                             ----LGEEHVLGTISSASMGLEHNHNGVILVEPEVT--STPLEBVVDDLSEKTEEITS
                                                                                                   QVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLAQEREADLRE 309
                                                                                                                                                                                 QIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLANGHVVPIKP
                                                                                                                                                                                                                                                 -----ERW----AVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTPLEENVVDRE
                                                                                                                                                                                                                                                                                                                                                                                          ĠADHFTVGITVTKKGSĠLÞSKRĠRRPGAKALSRVREDIVEDEGGS----GMGD-EENTSR 712
                                                                                                                                                                                                                                                                                                                                                                                                                              GVQRQGVSYSV-HAYTGQPSPRG------LHSENREDEGWQVYRLGARDAHQGRPT 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FSPIHLHSN----VAWTVEDPVDSAPPGQRKKE 635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ------PKPDGNDRGKTQTLVQVKSQEKTQEQAQASAAENTQGQSQKTMKGPAPK 1280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RRNALFPEVFSPTPDEN-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LPSTSQQVKPEALGAAPPSVKLPKIIKIAPPKEKSQSSAKANPQQKPQSPTRKPQQAWSQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----gvaga--palri------qksqssdll--ereresvlrreqevaee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RRREWEAKREEAKKKOE-----ETRROWLEEKKKOMHANDKPASTOOAKVEEAWPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----LSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEP----QQAQVPHVWGW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                             ----LSLE-VTPPFPAVSPPSASPVQTVTSAEESSAD-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.4%; Score 156.5; DB 7;
19.6%; Pred. No. 0.016;
rative 85; Mismatches 305;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -SDQNSRSSSQASGITGSYSVSE-----SPF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AND THERAPY OF BREAST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   606
                                                                                                                                                                                   249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1231
                                                                                                                                                                                                                                                                      189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  528
                                                                                                                                               847
                                                                                                                                                                                                                            812
```

O

ġ

657

189 772 141

```
$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 4
US-11-186-284-49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                               ; ORGANISM: Homo
US-11-186-284-49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 49, Application US/11186284 Publication No. US20050266493A1 GENERAL INFORMATION:
Query Match 4.4%; Score 156.5; DB 7; Best Local Similarity 19.6%; Pred. No. 0.016; Matches 167; Conservative 85; Mismatches 305;
                                                                                                                                     SEQ ID NO 49
LENGTH: 2828
                                                                                                                                                                PRIOR FILING DATE: 2001-12-10
PRIOR APPLICATION NUMBER: US 60/361,978
PRIOR FILING DATE: 2002-03-05
PRIOR APPLICATION NUMBER: US 60/381,988
PRIOR FILING DATE: 2002-05-20
NUMBER OF SEQ ID NOS: 228
SOFTWARE: PASKSEQ for Windows Version 4
                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/11/186,284
CURRENT FILING DATE: 2005-07-21
PRIOR APPLICATION NUMBER: US/10/301,822
PRIOR FILING DATE: 2002-11-21
PRIOR APPLICATION NUMBER: US 60/339,971
PRIOR FILING DATE: 2001-12-10
                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Thibodeau, Stephen N.
APPLICANT: Burgart, Lawrence J.
TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND
TITLE OF INVENTION: METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION,
TITLE OF INVENTION: THERAPY OF COLON CANCER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Millennium Pharmaceuticals, APPLICANT: Berger, Allison
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                      FILE REFERENCE: MPM01-029P2RNM
                                                                                                                    TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1021 STIGEPGVPGQSHLQGLTDNIHLVKSSLSTQDTLLIKKGMKEMSQTLQGGNMLEGDPTHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Berger, Allison
Guillemette, Tracy L.
Kamatkar, Shubhangi
Schlegel, Robert
Monahan, John E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RSSESEGOESKSITLPDSTLGIMSSMSPVKKPAETTVGTLLDKDTTTVTTTPROKVAPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TEGDLKGTAAPTLISEPYEPSPTLHTLDTVYEKPTHEETATEGWSAADVGSSPEPTSSEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TMSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFR------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RAADPAPEVRKVNRIPPD--AYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EPPLDAVSLAESEPMQYFDPDLETKSQPDEDKMKEDTFAHLTPTPTIWVNDSSTSQLFED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KSDILVTGES 1347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KNAMAERWES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RTVSLKTEGPYDSLDYMTTTRKIYSSYPKVQETLPVTYKPTSDGKEİKDDV--ATNVDKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SNVAWTVEDPVDSA------PPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EVALERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVSB-----SPFFSPIHLH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APDEPQQAQVPHVWGWEVAGAPALRLQKSQSSDLL------ERERESVLRREQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TMS----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KGTPRRKHGKRPNKHRYTP-----STVSSRÅSGSKPSPSPENKHRNIVTPSSETILLP
                                                                                                 Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   --RGRPSLYVQRDIVQETQREEDHRREGLHVGRASTPD-WVSEGP-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ---APDIKISSQVESSLVPTAWVDNTVNTPKQLEMEKNAEPTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -THPSRRRPNGRR------RLRPNKFRHRHKQTPPTTF 1174
    Indels
                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -LRRALSSDSILSPAP-DA 405
                                         2828;
    293;
    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AND
    35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                 RESULT 5
US-11-072-175-242
                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                            片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                      Sequence 242, Application US/11072175 Publication No. US20060029944A1 GENERAL INFORMATION:
                                         APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: IDENTIFICATION OF GENES FOR PREDICTING ACTIVITY OF COMPOUNDS THAT
TITLE OF INVENTION: INTERACT WITH AND/OR MODULATE PROTEIN TYROSINE KINASES AND/OR
TITLE OF INVENTION: PROTEIN TYROSINE KINASE PATHWAYS IN BREAST CELLS
        CURRENT APPLICATION NUMBER: US/11/072,175
                      FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1081
                                                                                                                                                                                                                                                                                                                                                                                                                              1227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1021 STIGEPGVPGQSHLQGLTDNIHLVKSSLSTQDTLLIKKGMKEMSQTLQGGNMLEGDPTHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       658 GADHFTVGITVTKKGSGLPSKRGRRPGAKALSRVREDIVEDEGGS----GMGD-EENTSR 712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    602 LAIPEAHLSWILPNRRIINDLANTSH-VYMLPNGT---LSIPKVQVSDSGYYRCVAVNQQ
                                                                                                                                                                                                                                                                                                                                                                                       614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 109 WALRPEDGE-----DKEMKTYRL-----DAGDADPRRLCDLER---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RLLHPKDQEVFLKTKDDAINGDKKAKKGRRKLKLWKHSEKEPETNVAEGRRVFESRRRIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GVQRQGVSYSV-HAYTGQPSPRG------LHSENREDEGWQVYRLGARDAHQGRPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LGIPQAHRGTGLV---LDGDTSYTYHLVCMGPEASGWGQDEPQTWPTD---HRA---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APDEPQQAQVPHVWGWEVAGAPALRLQKSQSSDLL------ERERESVLRREQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLAQEREADLRE 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MANKQINPERWADILAKVRGKNLPKGTEVPPL----IKTTSPPS------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ------BRW----AVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTPLEENVVDRE
                                                                                                                                                                                                                                                                                                     KNAMAERWES 670
                                                                                                                                                                                                                                                                                                                                                                                         SNVAWTVEDPVDSA---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TMSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFR------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RSSESEGQESKSITLPDSTLGIMSSMSPVKKPAETTVGTLLDKDTTTVTTTPRQKVAPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RAADPAPEVRKVNRIPPD--AYOPYLSPGTPOLEFSAFGAFGKPSSLSTAEAKAATSPKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EPPLDAVSLAESEPMQYFDPDLETKSQPDEDKMKEDTFAHLTPTPTIWVNDSSTSQLFED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TEGDLKGTAAPTLISEPYEPSPTLHTLDTVYEKPTHEETATEGWSAADVGSSPEPTSSEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QRGLRQATDHQELVEIPTRPLLTKLSLITA---PRRE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ----LGEEEHVLGTISSASMGLEHNHNGVILVEPEVT---STPLEEVVDDLSEKTEEITS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLANGHVVPIKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVSE-----SPFFSPIHLH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APSETFSTQPTQ-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TMS----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ----QPG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -----RGRPSLYVQRDIVQETQREEDHRREGLHVGRASTPD-WVSEGP-----
                                                                                                                                                                                                                                                                    KSDILVTGES 1347
                                                                                                                                                                                                                                                                                                                                               RTVSLKTEGPYDSLDYMTTTRKIYSSYPKVQETLPVTYKPTSDGKEIKDDV--ATNVDKH
                                                                                                                                                                                                                                                                                                                                                                                                                                KGTPRRKHGKRPNKHRYTP
                             PROTEIN TYROSINE KINASE PATHWAYS IN BREAST CELLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -LSLE-VTPPFPAVSPPSASPVQTVTSAEESSAD--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -APDIKISSQVESSLVPTAWVDNTVNTPKQLEMEKNAEPTS 1226
                                                                                                                                                                                                                                                                                                                                                                                                                                ----STVSSRASGSKPSPSPENKHRNIVTPSSETILLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -THPSRRRPNGRR-----
                                                                                                                                                                                                                                                                                                                                                                                       PPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -RLRPNKFRHRHKQTPPTTF 1174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -LRRALSSDSILSPAP-DA
```

463

1140

512

1337

1279

613

559

405

1080

385 960

1020

900

343

```
CURRENT FILING DATE: 2005-03-05
PRIOR APPLICATION NUMBER: US 60/406,385
PRIOR FILING DATE: 2002-08-27
PRIOR APPLICATION NUMBER: US 10/648,593
PRIOR FILING DATE: 2003-08-26
NUMBER OF SEQ ID NOS: 571
SOPTWARE: Patentin version 3.2
SEQ ID NO 242
LENGTH: 758
TYPE: PRT
                                                                                                                                                                                      RESULT 6
US-11-114-906-8
                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                       Sequence 8, Application US/11114906
Publication No. US20050266452A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Homo sapiens -11-072-175-242
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Mathur, Brian
APPLICANT: Friddle, Carl Johan
APPLICANT: Friddle, Carl Johan
TITLE OF INVENTION: Novel Human Kinases and Polynucleotides Encoding the Same
FILE REFERENCE: LEX-0281-USA
CURRENT APPLICATION NUMBER: US/11/114,906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                            435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             127
                                                                                                                                                                                                                                                                           483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     134; Conservative 73; Mismatches 256;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12 IPQAHRGT-GLVLDGDT----SYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQGVQRQGV 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TAPRRERGRPSLYVQR------DIVQETQREEDHRREGLHVGRASTPDWVSEGP 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VMEDHAGTYGL---GDRKDQGGYTMHQDQEGDTDAGLKESPLQT-PTEDGSEE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KAFNKPHLANGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKET 291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EAGIGOTPSLEDEAAGHVTQEPESGKVVQ------EGFLREPGPP--- 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DAGDADPRRICD-----LERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRST 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----PGSETSDAKSTPTAED-----VTAPLVDEGAPGKQAAAQPHTEIPEGTTAE 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q---PGLRRALSSDSILSPAPDARAADPAPEVRKVNRIPPDAYQPYLSPGTPQLEFSAFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EIPASEPDGPSVGRAKGQDAPLEFTFHVEITPNVQKEQAHSEE--HLGRAAFPGAPGEGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PIEREIRLAGEREADLRE----QRGLRQATDHQELVEIPTRP------LLTKLSLI 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PLEENVVDREQIDFLAARQQFLSLEQANKGAP--HSSPARGT--PAGTTP----GASQAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKEMKTYRL 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ELLK--HQLLGDLHQEGPPLKGA------
                                                                                                                                                                                                                                                                           ANATR---IPAKTPPAPKTPPSSGEPPKSGDRSGYSSPGSPGTPGSRSRTPS
                                                                                                                                                                                                                                                                                                                  AEERRNALFPEVFSPT-----PDENSDQNSRSSSQASGITGSYSVSES
                                                                                                                                                                                                                                                                                                                                                                                                   YFRIRPIRFRAPDEPQQ-AQVPHVWGWEVAGAPAIRIQKSQSSDLIERERESVIRREQEV 561
                                                                                                                                                                                                                                                                                                                                                                                                                                            SDDKKAKTSTRSSAKTLKNRPCLSPKLPTPGSSDPLI--QPSS--PAVCPE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EARGPSIGEDTKEADL--PEPSEKQPAAAPRGKPVSRV-----PQLKARMVSKSKDGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEDROVDESSPODSPPSKASPAÓDGRPPQTAAREATSIPGFPAEGAIPLPVDFLSKVS-T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----GLSHQLMS---GMPGAPLLPEGPREATRQPSGTGPEDTEGGRHAP
                                                                                                                                                                                                                                                                                                                                                              PPSSPKHVSSVTSRTG--SSGAKEMKLKGADGKTKIATPRGAAPPGOKGO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 758;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels 189;
                                                                                                                                                                                                                                                                                                                       604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      58
```

```
CURRENT FILING DATE: 2005-04-26
PRIOR APPLICATION NUMBER: US/10/413,437
PRIOR FILING DATE: 2003-04-11
PRIOR APPLICATION NUMBER: US/10/020,079
PRIOR PILING DATE: 2001-12-12
PRIOR PILING DATE: 2001-12-12
PRIOR PILING DATE: 2000-12-12
PRIOR PILING DATE: 2000-12-12
PRIOR APPLICATION NUMBER: US 60/259,422
PRIOR PILING DATE: 2001-05-08
NUMBER OF SEQ ID NOS: 40
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 8
                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                              8
                                                                        밁
                                                                                                      ð
                                                                                                                                          밁
                                                                                                                                                                                  δ
                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                よ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-11-114-906-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 124; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: homo :
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: VARIANT
LOCATION: (1)...(751)
OTHER INFORMATION: Xaa =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 751
                                                                                                                                                                                                                                                                                                                                                                                     476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                    617
                                                                                                                                                                                                                                                                                                                                                                                                                         250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      39
PLAAGNHRLMPSVLRI----SRSQLQQVW
                                                                                                              FSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLSTKQEASKPPRGCPQANRG 497
                                                                                                                                                      --SQPPTPG----SPSHSPLHSGPRPRRRESDPTGPQRQLEE---DRLSGHSLPRYSPLR
                                                                                                                                                                                          WVSEGPOPGLRRALSSDSIL--SPAPDARAADPAPEVRKVNRIPPDAYOPYLSPGTPQLE
                                                                                                                                                                                                                                                                                                                                                                                     CSSQPAQMLSVDTGHADRQASGRMDVSASVEQEALSNAFRSVPLAEEEDFDSKEWV---I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GVPSSPVRAPPDSPTTPVRSLRYRRVNSPESERLSTADGRVELPERRSRMDLPGSPSRQA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APHSSPARGTP-AGTTPGASQAPKAFNKPH-----LANGHV------VPIKP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ----ILPGRPSEGLGPSPHLVPHPGGPEAEVWEETDVNRNKLRINIGKSPCVEEEOSRGM 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STVATLQGTPDHG----DPRT----PGPPRSTPLEENVVDREQIDFLAARQQFLSLEQANKG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RLGARDAHQGRPTWALRPEDGEDKEMKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKS 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EAFDWEKAGTDALLSTSTSTPPQQNTRQTAAMFGVVNVT--PVPGDLLRENTED-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EASGW---GQDEPQTWPTDHRAQQGVQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVY
                                  VVRWEYERLRPLRFRAPDEPQQAQVPHVW 526
                                                                          RLASSVF----SSSTLETEHYPHPGGGGS----SGSSGSLIQRSRSAESSPVRAPHRRHA
                                                                                                                                                                                                                                EDLQHLPPQPLPPQLS-----QXD-
                                                                                                                                                                                                                                                                  QELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQREEDHRREGLHVGRASTPD 379
                                                                                                                                                                                                                                                                                                           IDKETELKOFPPGAEPSTSGTTDEEPEELRPLPEEGEERRRLGAEPTVRPRGRSMQALAE
                                                                                                                                                                                                                                                                                                                                             VD-----DPGSLASV-----ESPGTPKETPIEREIRLAQEREADLREQRGLRQATDH
                                                                                                                                                                                                                                                                                                                                                                                                                           ------TWASVQV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ----VLQGEHLSDQE-----NAPP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Āŋy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; Score 149; DB 7;
; Pred. No. 0.0096;
44; Mismatches 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 7; Length 751;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            203;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels 198;
                                                                                                                                                                                            437
                                                                                                                                                                                                                                                                                                             592
                                                                                                                                                                                                                                                                                                                                                                                       532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        95
                                                                                                                                                                                                                                  616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         249
```

RESULT 7
US-11-114-906-6
; Sequence 6, Application US/11114906
; Publication No. US20050266452A1
; GENERAL INFORMATION:
; APPLICANT: Turner, C. Alexander Jr

Mathur, Brian

```
ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                               당
                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                    밁
                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                             ঠ
RESULT 8
US-11-114-906-4
                                                               밁
                                                                                       र्
                                                                                                                         문
                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/11/114,906
CURRENT FILING DATE: 2005-04-26
FRIOR APPLICATION NUMBER: US/10/413,437
PRIOR FILING DATE: 2003-04-11
PRIOR APPLICATION NUMBER: US/10/020,079
PRIOR FILING DATE: 2001-12-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS: 40 SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Friddle, Carl Johan
TITLE OF INVENTION: Novel Human Kinases and
FILE REFERENCE: LEX-0281-USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: VARIANT LOCATION: (1)...(764) OTHER INFORMATION: Xaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
ORGANISM: homo sapiens
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENGTH: 764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ID NO 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 2001-05-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 60/255,103
FILING DATE: 2000-12-12
APPLICATION NUMBER: US 60/289,422
                                                                                                                           189
                                                                                                                                                                                                                                                                                                                                                                                                          250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              306
                                                                                            498
                                                                                                                                                      438
                                                                                                                                                                                     630
                                                                                                                                                                                                                 380 WVSEGPOPGLRRALSSDSIL--SPAPDARAADPAPEVRKVNRIPPDAYOPYLSPGTPOLE
                                                                                                                                                                                                                                                 606 EDLOHLPPOPLPPOLS----
                                                                                                                                                                                                                                                                                320
                                                                                                                                                                                                                                                                                                               546
                                                                                                                                                                                                                                                                                                                                              273
                                                                                                                                                                                                                                                                                                                                                                            489 CSSQPAQMLSVDTGHADRQASGRMDVSASVEQEALSNAFRSVPLAEEEDFDSKEWV---I
                                                                                                                                                                                                                                                                                                                                                                                                                                         429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    210 APHSSPARGTP-AGTTPGASQAPKAFNKPH-----LANGHV------VPIKP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
39
                                                               733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ----ILPGRPSEGLGPSPHLVPHPGGPEAEVWEETDVNRNKLRINIGKSPCVEEEQSRGM 428
                                                                                                                                                                                                                                                                              QBLVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQREEDHRREGLHVGRASTPD 379
                                                                                                                                                                                                                                                                                                               IDKETELKDFPPGAEPSTSGTTDEEPEELRPLPEEGEERRLGAEPTVRPRGRSMQALAE
                                                                                                                                                                                                                                                                                                                                                                                                                                          GVPSSPVRAPPDSPTTPVRSLRYRRVNSPESERLSTADGRVELPERRSRMDLPGSPSRQA 488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STVATLQGTPDHG---DPRT---PGPPRSTPLEENVVDREQIDFLAARQQFLSLEQANKG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RLGARDAHQGRPTWALRPEDGEDKEMKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EAFDWEKAGTDALLSTSTSTPPQQNTRQTAAMFGVVNVT--PVPGDLLRENTED-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EASGW----GQDEPQTWPTDHRAQQGVQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVY
                                                                                                                                                      FSAFGAFGKPSSLSTABAKAATSPKATMSPRHLSESSGKPLSTKQEASKPPRGCPQANRG
                                                                                                                                                                                                                                                                                                                                            VD-----DPGSLASV-----ESPGTPKETPIEREIRLAQEREADLREQRGLRQATDH
                                                               PLAAGNHRLMPSVLRI----SRSQLQQVW
                                                                                            VVRWEYFRLRPLRFRAPDEPQQAQVPHVW 526
                                                                                                                         RLASSVF----SSSTLETEHYPHPGGGGS----SGSSGSLIQRSRSAESSPVRAPHRRHA
                                                                                                                                                                                     --SQPPTPG----SPSHSPLHSGPRPRRRESDPTGPQRQLEE---DRLSGHSLPRYSPLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ---VLQGEHLSDQE------NAPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Any Amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 149; DB 7
Pred. No. 0.0099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches 203;
                                                                                                                                                                                                                                                                                                                                                                                                           -QVKGVVREE---NKVRAVP-----TWASVQV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Acid
                                                                757
                                                                                                                                                                                                                                                    -QXD----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 7; Length 764;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Polynucleotides Encoding the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               198;
                                                                                                                                                                                                                                                      -GRSET--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  95
                                                                                                                                                                                                                       437
                                                                                                                                                                                                                                                                                                                                                 319
                                                                                                                                                                                                                                                                                                                                                                                545
                                                                                                                                                                                                                                                                                                                                                                                                             272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Same
                                                                                                                                                                                        680
                                                                                                                                                                                                                                                      629
                                                                                                                                                                                                                                                                                                                    509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           249
                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                            8
                                                                                                                              밁
                                                                                                                                                                                                                                                      밁
                                                                  밁
                                                                                                                                                          S
                                                                                                                                                                                          밁
                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
```

Sequence

4, Application US/11114906

```
; NAME/KEY: VARIANT
; LICATION: (1)...(864)
; OTHER INFORMATION: Xaa = Any Amino Acid
US-11-114-906-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 4
LENGTH: 864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Publication No. US20050266452A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 4.2%;
Best Local Similarity 21.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/11/114,906
CURRENT FILING DATE: 2005-04-26
CURRENT FILING DATE: US/10/413,437
PRIOR APPLICATION NUMBER: US/10/413,437
PRIOR FILING DATE: 2003-04-11
PRIOR APPLICATION NUMBER: US/10/020,079
PRIOR FILING DATE: 2001-12-12
PRIOR FILING DATE: 2001-12-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 864
TYPE: PRT
ORGANISM: homo s
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: US 60/289,422 PRIOR FILING DATE: 2001-05-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Mathur, Brian
APPLICANT: Friddle, Carl Johan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: US 60/255,103 PRIOR FILING DATE: 2000-12-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Friddle, Carl Johan TITLE OF INVENTION: Novel Human Kinases and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILE REFERENCE: LEX-0281-USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  529
                                                                                                                                                                                                                            380 WVSEGPOPGLRRALSSDSIL--SPAPDARAADPAPEVRKVNRIPPDAYOPYLSPGTPOLE
                                                                                                                                                                                                                                                                                                                            320
                                                                                                                                                                                                                                                                                                                                                                          646
                                                                                                                                                                                                                                                                                                                                                                                                                           273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     589 CSSQPAQMLSVDTGHADRQASGRMDVSASVEQEALSNAFRSVPLAEEEDFDSKEWV---I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       406 BAFDWEKAGTDALLSTSTSTSPOONTROTAAMFGVVNVT--PVFGDLLRENTED-----
833
                                                                                                                                 438 FSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLSTKQEASKPPRGCPQANRG 497
                                                                                                                                                                                     730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96
                                                                                                                                                                                                                                                                                                                         QELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQREEDHRREGLHVGRASTPD 379
                                                                                                                                                                                                                                                                                                                                                                          IDKETELKDFPPGAEPSTSGTTDEEPEELRPLPEEGEERRRLGAEPTVRPRGRSMQALAE 705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GVPSSPVRAPPDSPTTPVRSLRYRRVNSPESERLSTADGRVELPERRSRMDLPGSPSRQA 588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ----ILPGRPSEGLGPSPHLVPHPGGPEAEVWEETDVNRNKLRINIGKSPCVEEEQSRGM 528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RLGARDAHQGRPTWALRPEDGEDKEMKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKS 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EASGW----GQDEPQTWPTDHRAQQGVQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVY
                                                                                                                                                                                                                                                                                                                                                                                                                       VD-----DPGSLASV-----ESPGTPKETPIEREIRLAQEREADLREQRGLRQATDH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APHSSPARGTP-AGTTPGASQAPKAFNKPH-----LANGHV------VPIKP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STVATLQGTPDHG---DPRT---PGPPRSTPLEENVVDREQIDFLAARQQFLSLEQANKG
PLAAGNHRLMPSVLRI----SRSQLQQVW
                                                                                                                                                                                   --SQPPTPG----SPSHSPLHSGPRPRRRESDPTGPQRQLEE---DRLSGHSLPRYSPLR
                                              VVRWEYFRLRPLRFRAPDEPQQAQVPHVW 526
                                                                                                                                                                                                                                                                                EDLOHLPPOPLPPOLS----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ----VLOGEHLSDQE----
                                                                                        -SSSTLETEHYPHPGGGGS----SGSSGSLIQRSRSAESSPVRAPHRRHA 832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; Score 149; DB 7; Length 864; ; Pred. No. 0.012; 44; Mismatches 203; Indels 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    --- QVKGVVREE---NKVRAVP----
  857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             --NAPP--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Polynucleotides Encoding the Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels 198;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ---TWASVQV
                                                                                                                                                                                                                                                                                     -GRSET--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             95
                                                                                                                                                                                          780
                                                                                                                                                                                                                                        437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 457
                                                                                                                                                                                                                                                                                       729
                                                                                                                                                                                                                                                                                                                                                                                                                                319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        249
```

```
ş
                                                                    밁
                                                                                                     á
                                                                                                                                          밁
                                                                                                                                                                          Ś
                                                                                                                                                                                                               문
                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-11-114-906-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-11-114-906-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 2, Application US/11114906
Publication No. US20050266452A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 124; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Mathur, Brian
APPLICANT: Friddle, Carl Johan
TITLE OF INVENTION: Novel Human Kinases and Polynucleotides Encoding the Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: US 60/289,422
PRIOR FILING DATE: 2001-05-08
NUMBER OF SEQ ID NOS: 40
SOFTWARE: FASESEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILE REFERENCE: LEX-0281-USA
CURRENT APPLICATION NUMBER: US/11/114,906
CURRENT FILING DATE: 2005-04-26
PRIOR APPLICATION NUMBER: US/10/413,437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 2003-04-11
PRIOR APPLICATION NUMBER: US/10/020,079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 870
TYPE: PRT
ORGANISM: homo sapiens
FEATURE:
NAME/KEY: VARIANT
LOCATION: (1)...(870)
OTHER INFORMATION: Xaa = Any Amino Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Y Match 4.2%;
Local Similarity 21.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 2001-12-12
APPLICATION NUMBER: US 60/255,103
FILING DATE: 2000-12-12
                                                                                                                                                                                                                                                                                                                                                                                                                                  479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    464
                                                                                                       380
                                                                                                                                          712
                                                                                                                                                                             320
                                                                                                                                                                                                                 652
                                                                                                                                                                                                                                                    273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 156
                                   438 FSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLSTKQEASKPPRGCPQANRG 497
                                                                                                                                                                                                                                                                                     595 CSSQPAQMLSVDTGHADRQASGRMDVSASVEQEALSNAFRSVPLAEEEDFDSKEWV---I
                                                                                                                                                                                                                                                                                                                                                                                             210 APHSSPARGTP-AGTTPGASQAPKAFNKPH-----LANGHV-------VPIKP----
   787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96 RLGARDAHOGRPTWALRPEDGEDKEMKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKS 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            39 EASGW----GQDEPQTWPTDHRAQQGVQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVY 95
                                                                                                       WVSEGPOPGLRRALSSDSIL--SPAPDARAADPAPEVRKVNRIPPDAYOPYLSPGTPOLE 437
                                                                                                                                                                                                                                                                                                                                                             GVPSSPVRAPPDSPTTPVRSLRYRRVNSPESERLSTADGRVELPERRSRMDLPGSPSRQA 594
                                                                                                                                                                                                                                                                                                                                                                                                                                                               STVATLQGTPDHG---DPRT---PGPPRSTPLEENVVDREQIDFLAARQQFLSLEQANKG 209
                                                                                                                                                                                                                                                    VD-----DPGSLASV-----ESPGTPKETPIEREIRLAQEREADLREQRGLRQATDH 319
RLASSVF---
                                                                                                                                                                             QELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQREEDHRREGLHVGRASTPD 379
                                                                                                                                                                                                                 IDKETELKDFPPGAEPSTSGTTDEEPEELRPLPEEGEERRRLGAEPTVRPRGRSMQALAE
                                                                                                                                                                                                                                                                                                                                                                                                                                  ----ILPGRPSEGLGPSPHLVPHPGGPEAEVWEETDVNRNKLRINIGKSPCVEEEQSRGM 534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EAFDWEKAGTDALLSTSTSTPPQQNTRQTAAMFGVVNVT--PVPGDLLRENTED-----
                                                                                                                                            EDLQHLPPQPLPPQLS-----QXD-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ------VLQGEHLSDQE-----NAPP-----
 -SSSTLETEHYPHPGGGGS----SGSSGSLIQRSRSAESSPVRAPHRRHA 838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             $; Score 149; DB 7; Length 870;$; Pred. No. 0.012;44; Mismatches 203; Indels 1
                                                                                                                                                                                                                                                                                                                        ---QVKGVVREE---NKVRAVP-----TWASVQV 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels 198;
                                                                                                                                              -----GRSET--
                                                                                                                                                                                                                                                                                       651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        478
                                                                                                                                                                                                                                                                                                                                                                                               249
                                                                                                                                                                                                                 711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 10
US-11-241-056-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ş
                             S
                                                                        밁
                                                                                                       Ś
                                                                                                                                              밁
                                                                                                                                                                            8
                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                       문
                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-11-241-056-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: PatentIn version 3.1
SEQ ID NO 14
LENGTH: 1360
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 14, Application US/11241056 Publication No. US20060024807A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 144; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Immunex Corporation
APPLICANT: Bird, Timothy A.
APPLICANT: Virca, G. Duke
APPLICANT: Martin, Unja
APPLICANT: Anderson, Dirk M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILE REFERENCE: 2923-US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                              564
                                                                                                                                                                                                                                                      365
                                                                                                                                                                                                                                                                                                                            324
                                                                                                                                                                                                                                                                                                                                                             396
                                                                                                                                                                                                                                                                                                                                                                                                273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        283
     680
                                      501
                                                                          624
                                                                                                           454
                                                                                                                                                                                                                                                                                         451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            498 VVRWEYFRLRPLRFRAPDEPQQAQVPHVW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97
     -----SPALARKNSPGNGSALG-PRLGSQPIRASN------PDLRRTEP 716
```

```
PRIOR APPLICATION NUMBER: US/09/980,464
PRIOR FILING DATE: 2001-11-27
NUMBER OF SEQ ID NOS: 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/11/241,056
CURRENT FILING DATE: 2005-09-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Martin, Unja
APPLICANT: Anderson, Dirk M.
TITLE OF INVENTION: NOVEL MURINE AND HUMAN KINASES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              343 NLPGESTLRRDFLRLQLAN-----KERSEALRROQLEQQQRENEEHK-RQLLAERQKRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             157 TVATLQGTPDHGD-----PRTPGP----------PRSTP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           182 VGRRNTFIGTPYW-MAPE-----GIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          223 AIEMAEGAPPLCDMHPMRALFLIPRNPAPRLKSKKWSKKFQSFIESCLVKNHSQRPATEQ 282
                                                                                                                                                                                                                                    LPPRSESFSISGVQPARTPPMLRPVDPQIPHLVAVKSQGPALTASQSVHEQPTKGLSGFQ 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VDDPGSLASVESPGTPKETPIEREIRLAQER-----EADLREQRGLRQATDHQELV---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LEENVVDREQIDFLAARQQF------LSLEQANKGAPHSSPARGTPAG--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LGARDAHQGRPTWALRPEDGEDKEMKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PLAAGNHRLMPSVLRI----SRSQLQQVW
WEYFRLRPLRPRAPDEPQQAQVPHVWGWEVAGAPALRLQKSQSSDLLERERESVLRREQE 560
                                                                                                                                                     EAKAATSPKATMSPRHLSE--SSGKPLST------KQEASKPPRGCPQANRGVVR 500
                                                                                                                                                                                                                                                                                                               --PAPEVRKVNRIPPDAYQPYLSPGTPQL-EFSAFGAFGKPSSLSTA------
                                                                                                                                                                                                                                                                                                                                                                                      RPVEKKPLYHYKEGM--SPSEKPAWAKEVEE---RSRLNRQS--SPAMPHKVANRISDPN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LEEEQRQLEILQQQLLHEQALLLEYKRKQLEEQRQAERLQRQLKQERDYLVSLQHQRQEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EEQKEQRRRLE-----EQQRREKELRKQQEREQRRHYEEQMRREEERRRAEHEQEYIRRQ 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTPGASQAPKAFNKPHLANGHVVPIKPQVKGVVR-----EENKVRAVPTWASVQV 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LMKHPFIRDQPNERQVRIQLKDHIDRTKKKRGEKDETEYEYSGSEEEEEENDSGEPSSIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----HRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAAD-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ---EIPTRPLLTKLSLITAPRR---ERGRPSLYVQRDIVQET-----QREED 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.1%; Score 148.5; DB 7;
20.3%; Pred. No. 0.022;
ative 87; Mismatches 251;
                                                                                  PRQNSDPTSENPPLPTRIEKFDRSSWLRQEEDIPPK-VPQRTTSI--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
```

33

679

563 409 510

453

```
RESULT 11
US-11-124-368A-305
; Sequence 305, Application US/11124368A
; Publication No. US20050287559A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                       ફ
                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                              ş
                                                                                                                                                                                 밁
                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                               S
밁
                                        ঠ
                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 21112
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 305
SEQ ID NO 305
TYPE: PRT
ORGANISM: Homo sapiens
S-11-124-368A-305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/11/124,368A CURRENT FILING DATE: 2005-05-09 PRIOR APPLICATION NUMBER: US 60/568,845 PRIOR FILING DATE: 2004-05-07 PRIOR APPLICATION NUMBER: US 60/625,936 PRIOR FILING DATE: 2004-11-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Michele Cargill APPLICANT: James J. Devlia APPLICANT: May Luke
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: Genetic Polymorphisms Associated with TITLE OF INVENTION: Vascular Diseases, Methods of Detection and Uses Thereof FILE REFERENCE: CL001524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 618 WTVEDPVDSAPPGORKKEOWYAGINPSDGINSEVLEAIRVTRHKNAMAE 666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          561 VABERRNALFPEVFSP---TPDENSDQNSRSSSQASGITGSYSVSESPFFSPIHLHSNVA 617
  960
                                                                                          907
                                                                                                                                                                                     928
                                                                                                                                                                                                                              324 EIPTRPLLTKLSL---ITAPRRERGRPSLYVQRDIVQETQREED------HRRE 368
                                                                                                                                                                                                                                                                           799
                                                                                                                                                                                                                                                                                                                       276 PGSLASVESPGTPKETPIEREIRLAQEREADLREQRGLRQAT------DHQELV 323
                                                                                                                                                                                                                                                                                                                                                                    758
                                                                                                                                                                                                                                                                                                                                                                                                                 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                               869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                584 LAVGKFTRTSGETTHTHREPAGDGKSIRTFK----ESPKQILDPAARVTGMKKWPRTPK 638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               717 ILE-----
                                                                                                                                   369 GLHVGRASTPDWVSEGPQPGLRRALSSDSILS----PAPDARAADPAPEVRKVNRIPPDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        44
                                                                                                                                                                                   IFVGTP-VQKLDLTENLTGSKRRPQTPK-----EEAQALEDLTGFKELFQTPGHTEE
                                                                                                                                                                                                                                                                                                                                                                      TPKEKAQALEDLAGFKELFQTPGHT-----EELVAAGKTTKIP-----CDS
                                                                                                                                                                                                                                                                                                                                                                                                               APK-----AFNKPHLANGHVVPIKPQVKGVVREE----NKVRAVPTWASVQVVDD 275
                                                                                                                                                                                                                                                                                                                                                                                                                                                               KADVEEEFLALRKLTPSAGKAMLTPKPAGGDEKDIKAFMGTPVQKLDLAGTLPGSKRQLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FLAARQQFLSLEQ----ANKGAPHSSPA------RGTP-----AGTTPGAS---Q 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EEAQSLEDLAGFKELFQTPGPSEESMTDEKTTKIACKSP-PPESVDTPTSTKQWPKRSLR 697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ----AHQGRPTWALRPEDGEDKEMKTYRLDAGDADPRRLCD-----LERERWAVI--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GONLLOT -- ODH-AKAPKSEKGKITKMPCQSLQPEPINTPTHTKQQLKASLGKVGVKEEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GODEPOTWPTDHRAQQGVQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARD--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KSEGSPVLPHEPAKVKPEE-----SRDITRPSRPASYKKAIDE
                                                                                        AVAAGKTTKMPCESSPPE----SADTPTSTRRQPKTPLEKRDVQKELSALKKLTQTS
                                                                                                                                                                                                                                                                           PQS-DPVDTPTSTKORP-KRSIRKA-DVEGELLACKNIMPSAGKAMHTPKPSVGEEKDII 855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -QGQAVRKSSTVATLQGTPDHGDP------RTPGPPRS--TPLEENVVDREQID 192
    GETTHTDKVPGGEDKSINAFRE-----TAKQKLDPAASVTGSKRHPKTKEKAQPLEDLAG 1014
                                           YQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRH-LSESSGKPL----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             James J. Devlin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.1%; Score 148; DB 7; Length 2801;
19.6%; Pred. No. 0.059;
ative 95; Mismatches 251; Indels 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -SPLORTSSGSSSSSSTPSSQPSSQGGSQPGSQAGSSERTRVRAN-S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        251; Indels 238;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     147
                                                                                                                                                                                     906
                                                                                                                                                                                                                                                                                                                                                                         798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-11-124-367A-433; Sequence 433, Application US/11124367A; Publication No. US20060024700A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                          S
                                                                                                                                             밁
                                                                                                                                                                                   S
                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
    Ś
                                                  밁
                                                                                                                                                                                                                                                                                                                              뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-11-124-367A-433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 34460
SOFTWARE: FastSEQ for Windows
SEQ ID NO 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 4.1%; Score 148; DB 7; Length 2801; Best Local Similarity 19.6%; Pred. No. 0.059; Matches 142; Conservative 95; Mismatches 251; Indels 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Hongjin Huang
TITLE OF INVENTION: Genetic Polymorphisms Associated with
TITLE OF INVENTION: Fibrosis Methods of Detection and Uses Thereof
FILE REFERENCE: CL001519.ORD
CURRENT APPLICATION NUMBER: US/11/124,367A
CURRENT FILING DATE: 2005-05-09
PRIOR APPLICATION NUMBER: US 60/568,846
PRIOR FILING DATE: 2004-05-07
PRIOR PILING DATE: 2004-05-07
PRIOR APPLICATION NUMBER: US 60/592,609
PRIOR PILING DATE: 2004-06-25
PRIOR PILING DATE: 2004-06-25
PRIOR PILING DATE: 2004-08-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Michele Cargill APPLICANT: Hongjin Huang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
ORGANISM: Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ENGTH: 2801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1181 SLGKVG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1075 ---RTPSAGKAMHTP------KPAVSGEKNIYAFMGTPVQKLDLTENLTGS--KRRL 1120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1015 LKELFQTPVCTDKPTTHEKTTKIACRSQPDPVDTPTSSKPQSKRSLRKVDVEEEFFALRK 1074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        560 EVAEERRNAL----FPEVF------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           479
                                                                                                                                                                                          230
                                                                                                                                                                                                                                                                              193 FLAARQOFLSLEQ----ANKGAPHSSPA------RGTP-----AGTTPGAS---Q 229
                                                                                                                                                                                                                                                                                                                                                                           148
                                                                                                                                                                                                                                                                                                                                                                                                                    584 LAVGKFTRTSGETTHTHREPAGDGKSIRTFK----ESPKQILDPAARVTGMKKWPRTPK 638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 527
    324 EIPTRPLLTKLSL---ITAPRRERGRPSLYVQRDIVQETQREED---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          44 GODEPOTWPTDHRAQQGVQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARD-- 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTPKEKAQALEDLAGFKELFOTRGHTEESMTNDKTAKVACKSSOPDPDKNPASSKRRLKT 1180
                                                                                                                                                                                                                                                                                                                           EBAQSLEDLAGFKELFQTPGPSEESMTDEKTTKIACKSP-PPESVDTPTSTKQWPKRSLR 697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ASGITG 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LRFRAPDEPQQAQVPHVWGWEVAGAPALRLQKS-----
                                                                                                                                                                                        APK-----AFNKPHLANGHVVPIKPQVKGVVREE----NKVRAVPTWASVQVVDD 275
                                                                                                                                                                                                                                        KADVEREPLALRKLTPSÄGKAMLTPKPÄGGDEKDIKAFMGTPVQKLDLÄGTLPGSKRQLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ----AHOGRPTWALRPEDGEDKEMKTYRLDAGDADPRRLCD----LERERWAVI-- 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GONLLOT--QDH-AKAPKSEKGKITKMPCQSLQPEPINTPTHTKQQLKASLGKVGVKEEL 583
                                                                                                                                             TPKEKAQALEDLAGFKELFQTPGHT------EELVAAGKTTKIP-----CDS 798
                                                                                                                                                                                                                                                                                                                                                                         -QGQAVRKSSTVATLQGTPDHGDP------RTPGPPRS--TPLEENVVDREQID 192
                                                  PQS-DPVDTPTSTKQRP-KRSIRKA-DVEGELLACRNLMPSAGKAMHTPKPSVGEEKDII
                                                                                             PGSLASVESPGTPKETPIEREIRLAQEREADLREQRGLRQAT---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         --STKQEASK------PPRGCPQANRGV----VRWEYFRLRP 508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ----SPTPDENSDONSRSSSQ 591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels 238;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -QSSDLLERERESVLRREQ 559
                                                                                                    -DHQELV 323
           ---HRRE 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
```

```
APPLICANT: May Luke
TITLE OF INVENTION: Genetic Polymorphisms Associated with
TITLE OF INVENTION: Vascular Diseases, Methods of Detection and Uses Thereof
FILE REFERENCE: CLO01524
CURRENT APPLICATION NUMBER: US/11/124,368A
CURRENT APPLICATION NUMBER: US/11/124,368A
CURRENT FILING DATE: 2005-05-09
PRIOR APPLICATION NUMBER: US 60/568,845
PRIOR FILING DATE: 2004-05-07
PRIOR APPLICATION NUMBER: US 60/625,936
PRIOR FILING DATE: 2004-11-09
NUMBER OF SEQ ID NOS: 21112
SOFTWARE: PASTSEQ for Windows Version 4.0
SEQ ID NO 306
LENGTH: 2896
TYPE: PRT
ORGANISM: Homo sapiens
밁
                               á
                                                                               밁
                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                      밁
                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 13
US-11-124-368A-306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 306, Application US/11124368A Publication No. US20050287559A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Michele Cargill APPLICANT: James J. Devli APPLICANT: May Luke
                                                                                                                                                                                                                                                                                                                                                                       Match 4.1%; Score 148; DB 7; Length 2896; Local Similarity 19.6%; Pred. No. 0.061;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             907 AVAAGKTTKMPCESSPPE-----SADTPTSTRRQPKTPLEKRDVQKELSALKKLTQTS 959
                                           193
                                                                                                                             148 -QGQAVRKSSTVATLQGTPDHGDP------RTPGPPRS--TPLEENVVDREQID 192
                                                                                                                                                                          679
  793
                                                                                                                                                                                                                 102 -----AHQGRPTWALRPEDGEDKEMKTYRLDAGDADPRRLCD-----LERERWAVI--
                                                                                                                                                                                                                                                                                                                                                   142; Conservative
                                                                                                                                                                                                                                                                                                     44 GODEPQTWPTDHRAQQGVQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARD--
                                        FLAARQQFLSLEQ----ANKGAPHSSPA------RGTP-----AGTTPGAS---Q 229
                                                                                                                                                                      LAVGKFTRTSGETTHTHREPAGDGKSIRTFK----ESPKQILDPAARVTGMKKWPRTPK 733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LRFRAPDEPQQAQVPHVWGWEVAGAPALRLQKS-----QSSDLLERERESVLRREQ 559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LKELFQTPVCTDKPTTHEKTTKIACRSQPDPVDTPTSSKPQSKRSLRKVDVEEEFFALRK 1074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YOPYLSPGTPOLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRH-LSESSGKPL----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KADVEEEFLALRKLTPSÄGKAMLTPKPÄGGDEKDIKAFMGTPVQKLDLÄGTLPGSKRQLQ 852
                                                                                    EEAQSLEDLAGFKELFQTPGPSEESMTDEKTTKIACKSP-PPESVDTPTSTKQWPKRSLR 792
                                                                                                                                                                                                                                                            GONLLOT--ODH-AKAPKSEKGKITKMPCQSLQPEPINTPTHTKQQLKASLGKVGVKEEL 678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SLGKVG 1186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ASÇITÇ 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QTPKEKAQALEDLAGFKELFQTRGHTEESMTNDKTAKVACKSSQPDPDKNPASSKRRLKT 1180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EVAEERRNAL----FPEVF--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GETTHTDKVPGGEDKSINÄFRE----TÄKQKLDPAASVTGSKRHPKTKEKAQPLEDLAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GLHVGRASTPDWVSEGPQPGLRRALSSDSILS----PAPDARAADPAPEVRKVNRIPPDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ---RTPSAGKAMHTP-----KPAVSGEKNIYAFMGTPVQKLDLTENLTGS--KRRL 1120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 James J. Devlin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ----STKQEASK-------PPRGCPQANRGV----VRWEYFRLRP 508
                                                                                                                                                                                                                                                                                                                                                   95; Mismatches
                                                                                                                                                                                                                                                                                                                                                     251; Indels 238;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -SPTPDENSDQNSRSSSQ 591
                                                                                                                                                                                                                      147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1014
                                                                                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 906
```

```
Sequence 434, Application US/11124367A

Publication No. US20060024700A1

GENERAL INFORMATION:
APPLICANT: Michałe Cargill
APPLICANT: Hongjin Huang
ITILE OF INVENTION: Genetic Polymorphisms Associated with
ITILE OF INVENTION: Fibrosis Methods of Detection and Uses Thereof
FILE REFERENCE: CL001519.ORD
CURRENT APPLICATION NUMBER: US/11/124,367A

CURRENT PILING DATE: 2005-05-09

PRIOR APPLICATION NUMBER: US 60/568,846
PRIOR APPLICATION NUMBER: US 60/582,609
PRIOR APPLICATION NUMBER: US 60/582,609
PRIOR APPLICATION NUMBER: US 60/599,554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
US-11-124-367A-434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
Ś
                                          밁
                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뭐
                                                                                                                                                                                                                    US-11-124-367A-434
                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 34460
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 434
LENGTH: 2896
                                                                                                                                Matches
                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                        TYPE: PRT
ORGANISM: Homo
                                                                                                                              Local Similarity
nes 142; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1276 SLGKVG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1170 ---KTPSAGKAMHTP-----KPÄVSGEKNIYAFMGTPVQKLDLTENLTGS--KRRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1055 GETTHTDKVÞGGEDKSINÁFRE-----TÁKQKLDPAASVTGSKRHPKTKEKAQÞLEDLAG 1109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1002 AVAAGKTTKMPCESSPPE-----SADTPTSTRRQPKTPLEKRDVQKELSALKKLTQTS 1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         592 ASGITG 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  853 TPKEKAQALEDLAGFKELFQTPGHT------EELVAAGKTTKIP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           230 APK-----AFNKPHLANGHVVPIKPQVKGVVREE----NKVRAVPTWASVQVVDD
102 -----AHOGRETWALRPEDGEDKEMKTYRLDAGDADPRRLCD-----LERERWAVI--
                                                                                   44 GODEPOTWPTDHRAQQGVQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARD--
                                             GONLLOT -- QDH-AKAPKSEKGKITKMPCQSLQPEPINTPTHTKQQLKASLGKVGVKEEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EVARERRNAL-----FPEVF--------SPTPDENSDQNSRSSSQ 591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LKELFQTPVCTDKPTTHEKTTKIACRSQPDPVDTPTSSKPQSKRSLRKVDVEEEFFALRK 1169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IFVGTP-VQKLDLTENLTGSKRRPQTPK-----EEAQALEDLTGFKELFQTPGHTEE 1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EIPTRPLLTKLSL---ITAPRRERGRPSLYVQRDIVQETQREED-------HRRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PGSLASVESPGTPKETPIEREIRLAQEREADLREQRGLRQAT------DHQELV 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QTPKEKAQALEDLAGFKELFQTRGHTEESMTNDKTAKVACKSSQPDPDKNPASSKRRLKT 1275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LRFRAPDEPQQAQVPHVWGWEVAGAPALRLQKS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GLHVGRASTPDWVSEGPQPGLRRALSSDSILS----PAPDARAADPAPEVRKVNRIPPDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PQS-DPVDTPTSTKQRP-KRSIRKA-DVEGELLACRNLMPSAGKAMHTPKPSVGEEKDII 950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ------PPRGCPQANRGV----VRWEYFRLRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          YQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRH-LSESSGKPL-----
                                                                                                                                Conservative
                                                                                                                                                                                                                                        sapiens
                                                                                                                                                     4.1%;
                                                                                                                                                     Score 148; DB 7;
Pred. No. 0.061;
                                                                                                                                   Mismatches
                                                                                                                                   251;
                                                                                                                                                                         Length 2896;
                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -QSSDLLERERESVLRREQ
                                                                                                                                   238;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ---CDS
                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    424
      147
                                                 678
                                                                                          101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      893
```

::

```
APPLICANT: James J. Dévlin
APPLICANT: May Luke
APPLICANT: May Luke
TITLE OF INVENTION: Genetic Polymorphisms Associated with
TITLE OF INVENTION: Vascular Diseases, Methods of Detection and Uses Thereof
FILE REFERENCE: CL001524
CURRENT APPLICATION NUMBER: US/11/124,368A
CURRENT APPLICATION NUMBER: US/11/124,368A
CURRENT FILING DATE: 2005-05-09
PRIOR APPLICATION NUMBER: US 60/568,845
PRIOR FILING DATE: 2004-05-07
PRIOR APPLICATION NUMBER: US 60/625,936
PRIOR APPLICATION NUMBER: US 60/625,936
PRIOR PRIOR DATE: 2004-11-09
NUMBER OF SEQ ID NOS: 21112
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 304
LENGTH: 3256
TYPE: PAT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ଼ ହ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-11-124-368A-304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                         US-11-124-368A-304
                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 304, Application US/11124368A Publication No. US20050287559A1 GENERAL INFORMATION:
Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Michele Cargill
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1276 SLGKVG 1281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1110 LKELFQTPVCTDKPTTHEKTTKIACRSQPDPVDTPTSSKPQSKRSLRKVDVEEEFFALRK 1169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           793 KADVEBEFLALRKLTPSÄGKAMLTPKPÄGGDEKDIKAFMGTPVQKLDLÄGTLPGSKRQLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             679 LAVGKFTRTSGETTHTHREPAGDGKSIRTFK----ESPKQILDPAARVTGMKKWPRTPK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TPKEKAQALEDLAGFKELFQTPGHT-----EELVAAGKTTKIP-----CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EEAQSLEDLAGFKELFQTPGPSEESMTDEKTTKIACKSP-PPESVDTPTSTKQWPKRSLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QTPKEKAQALEDLAGFKELFQTRGHTEESMTNDKTAKVACKSSQPDPDKNPASSKRRLKT 1275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LRFRAPDEPQQAQVPHVWGWEVAGAPALRLQKS-----QSSDLLERERESVLRREQ 559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GETTHTDKVPGGEDKSINAFRE----TAKQKLDPAASVTGSKRHPKTKEKAQPLEDLAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         YOPYLSPGTPOLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRH-LSESSGKPL----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AVAAGKTTKMPCESSPPE-----SADTPTSTRRQPKTPLEKRDVQKELSALKKLTQTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GLHVGRASTPDWVSEGPQPGLRRALSSDSILS----PAPDARAADPAPEVRKVNRIPPDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EIPTRPLLTKLSL---ITAPRRERGRPSLYVQRDIVQETQREED------HRRE 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PQS-DPVDTPTSTKQRP-KRSIRKA-DVEGELLACRNLMPSAGKAMHTPKPSVGEEKDII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PGSLASVESPGTPKETPIEREIRLAQEREADLREQRGLRQAT------DHQELV 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APK-----AFNKPHLANGHVVPIKPQVKGVVREE----NKVRAVPTWASVQVVDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FLAARQQFLSLEQ----ANKGAPHSSPA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -QGQAVRKSSTVATLQGTPDHGDP------RTPGPPRS--TPLEENVVDREQID 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ASGITG 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EVAEERRNAL----FPEVF-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ---RTPSAGKAMHTP------KPAVSGEKNIYAFMGTPVQKLDLTENLTGS--KRRL 1215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----PPRGCPQANRGV----VRWEYFRLRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IFVGTP-VQKLDLTENLTGSKRRPQTPK-----
  4.18;
  Score 148;
  BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ---RGTP----AGTTPGAS----Q
  7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -EEAQALEDLTGFKELFQTPGHTEE
  Length 3256;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ---SPTPDENSDONSRSSSO 591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               478
```

```
δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                              밁
                                                                                                                      á
                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                             뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 19.6%; Pred. No. 0.071; Matches 142; Conservative 95; Mismatches 251;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1094 EEAQSLEDLAGFKELFQTPGPSEESMTDEKTTKIACKSP-PPESVDTPTSTKQWPKRSLR 1152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1039 LAVGKFTRTSGETTHTHREPAGDGKSIRTFK----ESPKQILDPAARVTGMKKWPRTPK 109:
                                                                                                                                                                                                                                                                                                                              1415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1213 TPKEKAQALEDLAGFKELFQTPGHT------EELVAAGKTTKIP------CDS
                                                                                                                                                               1530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1311 IFVGTP-VQKLDLTENLTGSKRRPQTPK-----EEAQALEDLTGFKELFQTPGHTEE
1636 SLGKVG 1641
                                                                                                                                                                                                                                                                                                                                                                     425
                                                                                                                                                                                                                                                                                                                                                                                                                                                     369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     148
                                                                                                                                                                                                                                                                                        479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 102 -----AHQGRPTWALRPEDGEDKEMKTYRLDAGDADPRRLCD-----LERERWAVI--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            982 GONLLOT--QDH-AKAPKSEKGKITKMPCQSLOPEPINTPTHTKQQLKASLGKVGVKEEL 1038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                44 GODEPOTWPTDHRAQQGVQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARD--
                                                                            QTPKEKAQALEDLAGFKELFQTRGHTEESMTNDKTAKVACKSSQPDPDKNPASSKRRLKT 1635
                                                                                                                                                                                                   LRFRAPDEPQQAQVPHVWGWEVAGAPALRLQKS-----QSSDLLERERESVLRREQ 559
                                                                                                                                                                                                                                                                                                                                                                                                                                                 GLHVGRASTPDWVSEGPQPGLRRALSSDSILS----PAPDARAADPAPEVRKVNRIPPDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EIPTRPLLTKLSL---ITAPRRERGRPSLYVQRDIVQETQREED-------HRRE 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PGSLASVESPGTPKETPIEREIRLAQEREADLREQRGLRQAT------DHQELV 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KADVEEEFLALRKLTPSÄGKAMLTPKPÄGGDEKDIKAFMGTPVQKLDLÄGTLPGSKRQLQ
                                                                                                                                                                                                                                                                                                                                                                                                             AVAAGKTTKMPCESSPPE-----SADTPTSTRROPKTPLEKRDVQKELSALKKLTQTS
                                      ASGITG 597
                                                                                                                                                               ---RTPSAGKAMHTP-----KPAVSGEKNIYAFMGTPVQKLDLTENLTGS--KRRL 1575
                                                                                                                                                                                                                                                LKELFQTPVCTDKFTTHEKTTKIACRSQPDPVDTPTSSKPQSKRSLRKVDVEEEFFALRK 1529
                                                                                                                                                                                                                                                                                                                              GETTHTDKVPGGEDKSINAFRE----TAKQKLDPAASVTGSKRHFKTKEKAQFLEDLAG 1469
                                                                                                                                                                                                                                                                                                                                                                     YQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRH-LSESSGKPL----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PQS-DPVDTPTSTKQRP-KRSIRKA-DVEGELLACKNLMPSAGKAMHTPKPSVGEEKDII 1310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APK-----AFNKPHLANGHVVPIKPQVKGVVREE----NKVRAVPTWASVQVVDD 275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FLAARQQFLSLEQ----ANKGAPHSSPA-----RGTP-----AGTTPGAS---Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -QGQAVRKSSTVATLQGTPDHGDP-----
                                                                                                                         EVAEERRNAL - - - - FPEVF - -
                                                                                                                                                                                                                                                                                        -----STKQEASK-----
                                                                                                                                                                                                                                                                                        -PPRGCPOANRGV----VRWEYFRLRP 508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -RTPGPPRS--TPLEENVVDREQID 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                           -SPTPDENSDQNSRSSSQ 591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               238;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          147
                                                                                                                                                                                                                                                                                                                                                                                                                   1414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101
                                                                                                                                                                                                                                                                                                                                                                           478
                                                                                                                                                                                                                                                                                                                                                                                                                                                            424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             229
```

Search completed: March 3, 2006, 14:19:02 Job time: 36.3333 secs

Cosso Mode Spasin

```
eggrung vabilen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wordwadzewi
                                                                                                                                                                                                                                                                                                                                                            Regult
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Listing first 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OPEGO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            March 3, 2006, 14:18:31; Search time 245.321 Seconds (without alignments) 1216.113 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-646-873-42
679
                                                                                                                                                                                                                                                                                                                                                        Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2443163 segs, 439378781 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gapop 60.0 ,
                                                                                                                                                                                                                                                                         100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A_Geneseq_21:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MDRVTRYPILGIPQAHRGTG.....HKNAMAERWESRIYASEEDD
                GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     geneseqp1980s:*
geneseqp190s:*
geneseqp2000s:*
geneseqp2001s:*
geneseqp2002s:*
geneseqp2003as:*
geneseqp2003bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         geneseqp2005s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gapext 60
                                                                                                                                                                                                                 AAW79676
AAE07319
ADA126379
ADA17172
ADX97562
ADX975674
AAM79574
AAM78590
ADG14341
  AAG73987
ABG60042
AAG75071
AAW79677
AAB07320
ADM17173
AAW79679
ADA26382
ADM17173
AAW7967322
ADA26382
ADM17175
                                                                                                                                                                                                                                                                                                                                                              Ħ
                                                                                                                                                                          ADA26384
ADN17177
                                                                                                                                                                                                      AAE07324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bummaries
                                                                                                                                                                                                                                                                                                                                                                                                         SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
Aaw79676 Human CS1
Aae07319 Human CS
Ada26379 Predicted
Adn17172 CS198 pro
Adx97562 Pancreati
Aam79574 Human pro
Aam79590 Human pro
Aam79581 Human CS1
Aaw79681 Human CS2
Ada26384 Synthetic
Adn17177 CS198 pro
Aag71987 Human CO1
Abo60042 Human gen
Aag71987 Human CS1
Aae07320 Human CS
Ada26380 Synthetic
Ada17177 CS198 pero
Aaw79679 Synthetic
Ada26380 Synthetic
Aae07322 Human CS
Ada26380 Synthetic
Aae07322 Human CS
Ada26380 Synthetic
Aae17175 CS198 pep
Aaw79679 Synthetic
Ade17175 CS198 pep
                                                                                                                                                                                                                                                                                                                                                              Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          679
```

**8 B 8** 

61 VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE

Query Match 100
Best Local Similarity 100
Matches 679; Conservative

100.0%; Score 679; I 100.0%; Pred. No. 0; tive 0; Mismatches

DB 2;

Length 679; Indels

<u>,</u>

Gaps

60

SQS	**************************************	yy Sq	X P P P	X II R	<b>.</b>	<b>7</b> P P	₹ ₩ \$	¥ # ?	<b>48</b>	X P.	183	\$222 <b>2</b> \$	¥ 23 3	<b>X</b> II I	ቋጽ!	RES AAW		
Sequence	This s method sample tract diagno or det tract, gastri pancre	Claim	New g for d gastr	WPI;	Billi Grana Rober	(ABBO )	31-MA	30-MA	08-00	WO984	Homo	Gastr human gastr pancr	Human	11-JA	AAW79676	RESULT 1 AAW79676 ID AAW79		3288225 109887
nce 679	equen to d The disor sing, ermin such tis, atiti	26; Page	New gastrointestinal pol for developing products gastrointestinal disorde	1998-542714/46	Billing-Medel Granados EN, Roberts-Rapp	) ABBO	31-MAR-1997;	30-MAR-1998;	08-OCT-1998.	WO9844159-A1	sapiens	Gastrointestinal tract, human; predisposition; gastritis; leiomyoma; pancreatitis.	Human CS198 [	11-JAN-1999	676;	T 1 676 AAW79676 standard;		300 300 300
ΑA;	ce represe etect the CS198 gen The Staging, ing the present the pr	ge 100-1	testinal ng produ inal dis	2714/46.	PA, Hayde L, Ru	ABBOTT LAB.	97US-	-0M86		•	•	nal tract position; piomyoma;	protein.	(first				\$ \$ \$ \$ \$ \$ \$ \$ \$
	presents the left the presence of the presence of user of the methods of the monitoring, monitoring predisposi of tract cance:	102;	inal polynu roducts for disorders,		ב ב		97US-0082885	98WO-US006251			•			entry)		protein;		
	these terms of the terms of t	127	re, for		건 H X		885	525				; GI tr treatm polyps;		2		<b>3</b>		4000400
	an CS198 protein a target CS198 p as a marker for products can be prognosticating, n to diseases and Barret's oesophag ohn's disease, ul	100-102; 127pp; English.	cleotides, CS198, and their the diagnosis and treatmen e.g. cancers, gastric ulce		M, Colpitts TL, Priedman PN, G Hodges SC, Klass MR, Kratochvil JC, Stroupe SD;		55.	51.				act; cancer; disease; ent; Barret's oesopha Crohn's disease; ulc			- -	; 679 AA.	ALIGNMENTS	AAB07321 P ADA26381 P ADN17174 P AAW79680 I AAB07323 I ADA26383 I
	which is used in a blymucleotide in a test olymucleotide in a test gastrointestinal (GI) used in detecting, preventing or treating, conditions of the GI us, gastric ulcer, cerative colitis, and		detection - used t of gastritis.		, Gordon J; hvil JD;							<pre>detection; CS198; gus; gastric ulcer; grative colitis;</pre>						Aae07321 Human CS Ada26381 Synthetic Adn17174 CS198 pep Aaw79680 Synthetic Aae07323 Human CS Ada26383 Synthetic Adn17176 CS198 pep

```
RESULT 2
AAE07319
ID AAE0
XX AAE0
XX O6-N
XX Huma
XX Huma
XX CS 1
KW Gast
KW Barz
XX Homc
XX Hom
XX H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      श
                                                                                                                                                                                                                                                                                                                                                                                                                                                 CS 198; gastrointestinal tract disease; GI tract; cancer; gastric gastritis; Crohn's disease; ulcerative colitis; pancreatitis; Barret's oesophagus; gene therapy; drug screening; human.
                                                                            31-MAR-1997;
                                                                                                                                30-MAR-1998;
                                                                                                                                                                                                                                                                                                                    Key
Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                   Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human CS 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAE07319;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAE07319 standard; protein;
  (BILL/) BILLINGEL P
(COHE/) COHEN M.
                                                                                                                                                                                                                                                                                                                                                                                                   sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NGHVVPIKPQVKGVVRBENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REEDHRREGIHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KNAMAERWESRIYASEEDD 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOSSDILERERESVIRREOEVAEERRNALFPEVFSPTPDENSDONSRSSSOASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                               97US-00828855
                                                                                                                                   98US-00050516
                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                           /note=
                                                                                                                                                                                                                                                                                           "Encoded by CGGN'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            480
```

2 2 2 2 2 2 2

301

181

121 181

LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA

LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA

180 180 240 240

NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA

NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP

MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP

```
В
                          S
                                                              밁
                                                                                                                                                                                                                   The invention relates to a method of detecting the presence of a target CC CS 198 polynucleotide comprising contacting the test sample with at least CC one CS 198-specific polynucleotide. The method is useful for detecting CC diseases of the gastrointestinal (GI) tract organs, particularly cancer. CC reating, diagnosing, staging, monitoring, prognosticating, preventing, cc treating or determining predisposition to disease and conditions of the CC GI tract such as cancer, gastric ulcer, gastritis, Crohn's disease, CC ulcerative colitis, pancreatitis and Barret's oesophagus. The CS 198 cc polypeptides are useful as standards or reagents in diagnostic cc immunoassays, as components or as target sites for various therapies. CC Antibodies directed against at least one epitope contained within these colypeptides are useful as delivery agents for therapeutic agents, in CC diagnostic tests and for screening for conditions or diseases associated with CS 198, particularly cancer. Monoclonal antibodies may also be used CC with CS 198, particularly cancer antibodies for therapeutic use. The CS 198 colypucleotide is also useful in gene therapy and drug screening. The CC method of the invention provides an alternative, non-surgical diagnostic cc method capable of detecting early stage GI tract disease such as cancer. The present sequence is human CS 198 polypeptide
                                                                                            Ş
                                                                                                                              Matches
                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, contacting test sample with at least one CS 198-specific polynucle
                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2001-496163/54.
N-PSDB; AAD13637.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Billingel PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 17; Page 49-51; 68pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Roberts-Rapp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Granados
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (GORD/)
(GRAN/)
(HAYD/)
(HODG/)
(KLAS/)
(KRAT/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FRIE/)
                                                                                                                               679;
   61
                                   13
                                                                 <u>, ...</u>
                                                                                               H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HAYDEN M.
HODGES S C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GORDON J.
GRANADOS E N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COLPITTS
FRIEDMAN
                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KLASS M R.
KRATOCHVIL J
                                                                                                                                                                                               679
                    VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                     MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EN,
 VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                 MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                               Conservative
                                                                                                                                                                                              AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cohen I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ohen M,
yden M,
Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7 T
                                                                                                                                             100.0%; Score 679;
100.0%; Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ۲۷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Colpitts TL, Friedman Hodges SC, Klass MR, JC, Stroupe SD;
                                                                                                                               <u>.</u>
                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Friedman PN,
                                                                                                                                                               В
                                                                                                                                                              4:
                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PN, Gordon J;
Kratochvil JD;
                                                                                                                                                              Length
                                                                                                                               Indels
                                                                                                                                                               679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tract, comprises polynucleotide.
                                                                                                                               0
                                                                                                                               Gaps
   120
                                   120
                                                                 60
```

```
RESULT 3
ADA26379
IID ADA2
XX
XX
AC ADA2
XX
XX
CS1.
XX
CS1.
XX
CS2.
XX
CS2.
XX
CS3.
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          १
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ई
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       문
                                        Billingel PA,
Granados EN,
Roberts-Rapp L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CS198; cancer diagnosis; cancer staging; cancer monitoring; cancer prognosticating; cancer prevention; cancer; gastrointestinal tract disorder; gene therapy.
                                                                                                                                                          (BILL/)
(COHE/)
(COLP/)
(FRIE/)
(GORD/)
(GRAN/)
(HAYD/)
(HODG/)
                                                                                                                                                                                                                                                                                                        31-MAR-1997;
30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADA26379 standard; protein; 679
                  WPI; 2003-596961/56
                                                                                                                                                                                                                                                                                                                                                  23-OCT-2002;
                                                                                                                                                                                                                                                                                                                                                                              01-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                           US2003082619-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20-NOV-2003
                                                                                                   (KRAT/)
(ROBE/)
(RUSS/)
(STRO/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                 BILLINGEL P A.
COLPITYS T L.
PRIEDMAN P N.
GORDON J .
HAYDEN M A.
HAYDEN M A.
HODGES S C.
KLASS M R.
KRATOCHVIL J C.
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VSESPFFSPIHLHSNVAWTVEDPVDSAPFGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SQSSDLLERERESVLRREQEVABERRNALFPEVFSFTFDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SQSSDLLERERESVLRREQEVAEERRNALFPEVFSFTFDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KQEASKPPRGCPQANRGVVRWBYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VSESPPPSPIHLHSNVAWTVEDPVDSAPPGORKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             amino
                                                                                                                                                                                                                                                                                                                                                   2002US-00278547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                          ŗ
                                           Hayden MA,
L, Russell
                                                                                                                                                                                                                                                                                                        97US-00828855.
98US-00050516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             acid
                                                                                                                                 r o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             eequence
                                           Colpitts TL,
Hodges SC,
JC, Stroupe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CS198
                                             Friedman
Klass MR,
SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein.
                                                            PN, Gordon
Kratochvil
                                                            นูบู;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             탕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                               á
                                                                                                                                                                밁
                                                                                                                                                                                        ð
                                                                                                                                                                                                                      片
                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                  밁
                  8
                                                밁
                                                                           S
                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Sim
Matches 679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Detecting comprises detecting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                    541
                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                             241
                      661
                                                   601
                                                                                                         541
                                                                                                                                                                481
                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      679
    KNAMAERWESRIYASBEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       49-50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
```

the presence of a target CS198 polynucleotide in a test sample contacting the sample with a CS198 specific polynucleotide and the presence of the target CS198 polynucleotide in the test

67pp; English

The invention describes a method of detecting the presence of a target CS198 polynucleotide in a test sample. The method comprises contacting the test sample with at least one CS198 specific polynucleotide or its complement, and detecting the presence of the target CS198 polynucleotide in the test sample, where the CS198-specific polynucleotide has at least 50% identity to a polynucleotide having any of the 27 fully defined sequences of 34-2894 bp (S1-27) given in the specification, or their fragments or complements. The composition and methods are useful in diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition of an individual to, diseases and conditions of the gastrointestinal tract, e.g. cancer and in gene therapy. This is the predicted amino acid sequence of the human CS198 protein derived from the CS198 consensus sequence shown in seq id 27.

°,

Score 679; Pred. No. 0; Mismatches

멂 <u>ن</u> 0

Length

0,

Gaps

MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE VSESPFSSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEYAGAPALRLQK PPDAYOPYLSPGTPQLBPSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ | OEREADLREGRGLROATDHQELVEIPTRPLLIKLSLITAPRRERGRPSLYVQRDIVQETQ NGHVVPIKPQVKGVVRBENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIERBIRLA LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE 360 300 240 180 120 120 60 660 600 540 540 480 420 420 360 300 240 180 660 600 480

```
RESULT 4
ADNI7172
ADDIFF
ADDI
               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              닭
                                    S
                                                                        Query Match
Best Local S
Matches 679
                                                                                                                                                                                                                                                                                                                                                                                                                                             Billingel PA,
Granados EN,
Roberts-Rapp
                                                                                                                                                                         The invention relates to reagents and methods for detecting diseases of the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polynucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of diseases or conditions associated with aberrant expression or activity of the CS198 polypeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 protein used to illustrate the method of the
                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                               Claim 17;
                                                                                                                                                                                                                                                                                                                                           Diagnosing diseases such as cancer of the gastrointestinal tract, detecting aberrant expression or activity of the CS198 polypeptid associated treatment methods.
                                                                                                                                                                                                                                                                                                                                                                                                     GENBANK;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (GORD/)
(GRAN/)
(HAYD/)
(HODG/)
(KCAS/)
(KCAS/)
(KCAT/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (BILL/)
(COHE/)
(COLP/)
(FRIE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31-MAR-1997;
30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22-AUG-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           04-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US2004043406-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gastrointestinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADN17172;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADN17172 standard; protein; 679 AA.
                                                                                                                                                                invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (RUSS/)
                                                                                                                                                                                                                                                                                                                                                                                                     2004-313754/29.
NK; D87440.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein
                                                                         al Similarity
679; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COLPITS T L.
FRIEDMAN P N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KRATOCHVIL J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BILLINGEL P A.
                                                                                                                                    679
                                   MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KNAMAERWESRI YASEEDD
                MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                                               SEQ
                                                                        100.0%;
llarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                ŗ
                                                                                                                                  ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                               Cohen M,
Hayden MA,
L, Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2003US-00646873.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first
                                                                                                                                                                                                                                                                                                            ID NO 42; 67pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97US-00828855.
98US-00050516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tract;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        r o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GI
                                                                                                                                                                                                                                                                                                                                                                                                                                               Colpitts TL,
Hodges SC,
JC, Stroupe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tract;
                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               679
                                                                        Score 679; I
Pred. No. 0;
Mismatches
                                                                                                                                                                                                                                                                                                             English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CS198; cancer; gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                Klass MR,
SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Friedman
                                                                                                     BB
                                                                                                     8;
                                                                        <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PN,
                                                                                                    Length 679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kratochvil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                therapy.
                                                                                                                                                                                                                                                                                                                                                          polypeptide,
                                                                                                                                                                                                                                                                                                                                                                                                                                                              g;
                                                                        0
                                                                                                                                                                                                                                                                                                                                                                        ý
                                                                                                                                                                                                                                                                                                                                                            and
                60
                                              60
                                                                         0
ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ίδ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
(HINZ/)
(ROSE/)
(PILA/)
(DAHL/)
(SPEC/)
(LICH/)
                                                                                                                                                              27-OCT-2004.
                                                                                                                                                                                                                                                      pancreas tumor;
                                                                                                                                                                                                                                                                                   Pancreatic cancer associated
                                                                                                                                                                                                                                                                                                                                              ADX97562
                                                                                                                                                                                                                                                                                                                                                                         ADX97562
                                                                                                     31-MAR-2003; 2003DE-01015834
                                                                                                                                  31-MAR-2004;
                                                                                                                                                                                             EP1471075-A2
                                                                                                                                                                                                                                                                                                                21-APR-2005
                                                                                                                                                                                                                         sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                   661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
             HINZMANN B.
ROSENTHAL A.
PILARSKY C.
DAHL E.
SPECHT T.
   LICHTNER
                                                                                                                                                                                                                                                                                                                                                                         standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  KNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KNAMAERWESRIYASEEDD
                                                                                                                                    2004EP-00090124.
                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                      cytostatic
                                                                                                                                                                                                                                                                                                                                                                           692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              679
                                                                                                                                                                                                                                                                                                                                                                                                                                                   679
```

```
61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NGHVVPIKPQVKGVVRBENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIERBIRLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VQRQGVSYSVHAYTGQP8PRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLBAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIERBIRLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PPDAYOPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
human
                                                                                                                                                                                              8
protein,
   SEQ
   IJ
```

540 600 600 660 540

360 420 420 480 360

```
CC treatment of pancreatic cancer, using a substance that inhibits or binds controlled to the protein or its DNA, including: an antisense oligonucleotide, short correctly controlled to the protein or its DNA, including: an antisense oligonucleotide, short correctly an entered against the pancreatic protein, an expectably appreciably an entered to the pancreatic protein, an expectably having a molecular weight below 5000, and the controlled to the pancreatic DNA, an aptamer or compound. Intibody, preferably human or humanized, that binds to the gancreatic DNA, or an anti-idiotypic antibody raised against the compound. Immunostimulant and/or radioisotope. The novel group, cyrotoxic compound, immunostimulant and/or radioisotope. The novel compound, immunostimulant and/or radioisotope. The novel condon pancreatic proteins and their encoding DNA have cytostatic condons of the inverse and proteins associated with pancreatic condons of the invention. Note: This sequence is not shown in the conscision of the invention. Note: This sequence is not shown in the pancreatic condons of the invention. Note: This sequence is not shown in the conscision of the invention. Note: This sequence is not shown in the conscision of the invention. Note: This sequence is not shown in the protein sequence with this specification by the European Patent Office.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Simi
Matches 679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to a novel human nucleic acid sequence of the pancreas and its encoded proteein. The invention further comprises: proteins and paptides, preferably isolated, that contain a sequence encoded by the novel nucleic acid; and methods for diagnosis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rosenthal A,
Lichtner R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 692 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nucleic acid differentially expressed in pancreatic tumor tissue, as diagnostic agents and in screening for therapeutic agents.
                                                                                                                                                                                   374
                                                                                                                                                                                                                                                                                        314
                                                                                                                                                                                                                                                                                                                                                                                         254
                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                481
                                                                                434
                                                                                                                                421
                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 110; 28pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
KQEASKPPRGCPQANRGVVRWEYFRLRFLRFARDBEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                   REEDHRREGLHYGRASTPDWYSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKYNRI
                                                                                                                                                                                                                                                                                                                      QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                           NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                                                                                                                                                                                                                                              NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTFKETPIEREIRLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LBENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                             PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                   REEDHRREGLHVGRASTPDWVSEGPQPGLRKALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                      QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pilarsky
Staub E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Staub
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Roepcke s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 679;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     s, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Specht T,
Li X;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bruemmendorf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 692;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                  540
                                                                                                                                     480
                                                                                                                                                                                        433
                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                           373
                                                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                              313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                     493
```

5

밁

ঠ 밁

밁

밁 र्

ð

당

ઇ 밁 S 밁 र् 문 á

```
RRSULT 6
AAM752
AAM752
AC AAM7
XX AAM75
AC AAM7
XX AAM77
XX AAM7
XX AAM7
XX Huma
XX Huma
XX Huma
XX Homc
XX Homc
XX W 158
XX O5-1
PF 05-1
PF 27-1
PR 27-1
PR 27-1
PR 27-1
PR 30-1
PR 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-JUN-2000;
19-JUL-2000;
01-SEP-2000;
                                                                                                    The invention relates to polynucleotides (AAKS1456-AAKS3435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoiesis regulating activity, tissue growth factor activity, immunomodulatory activity and activity inhibin activity and may be useful in the diagnosis and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; cytokine; cell proliferation; cell differentiation; gene th vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; immunomodulatory; cancer; leukaemia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tang
Ma Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAM79574;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAM79574 standard; protein; 672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nucleic acids encoding polypeptides with cytokine-like activities, useful in diagnosis and gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-SEP-2000;
20-OCT-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03-FEB-2000;
27-APR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-FEB-2001; 2001WO-US004098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nervous system disorder; arthritis; inflammation.
treatment of cancer, leukaemia, nervous system disorders, arthritis and inflammation. Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666 (AAM80020) are omitted as the relevant pages from the contraction of the contraction 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xue AJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g YT,
Zhao w
Yang Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001-476283/51.
DB; AAK52707.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20; Page 288; 6221pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KNAMAERWESRIYASEEDD 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VSESPFPSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SQSSDLLERERESVLRREQEVABERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VSESPFFSPIHLHSNVAWTVEDFVDSAPPGQRKKEQWYAGINFSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Liu C, Drmanac F
nao QA, Wang D, V
Yang Y, Wejhrman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ); 2000US-00496914.

); 2000US-00560875.

); 2000US-00598075.

); 2000US-00620325.

); 2000US-00654936.

); 2000US-00693325.

); 2000US-00693325.

); 2000US-00693252.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 3220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Drmanac RT,
lang D, Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Asundi V,
JJ, Zhang
Goodrich R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ָא<sup>;</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Zhou P, ;
J, Ren F,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R, Cao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene therapy;
           pages from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      613
```

```
PD 09-A
                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                       ठ
                                                                                                                                                                                                                                                                              음 성
                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                               중 유
                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SXS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                      Human; cytokine; cell proliferation; cell differentiation; gene therapy; vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorder; arthritis; inflammation.
 09-AUG-2001
                   WO200157190-A2
                                    Homo sapiens.
                                                                                                    Human protein
                                                                                                                       06-NOV-2001
                                                                                                                                                         AAM78590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sequence
                                                                                                                                                                                                                                          550
                                                                                                                                                                                                                                                                                                                  430
                                                                                                                                                                                                                                                                                                                                                       370
                                                                                                                                                                                                                                                                                                                                                                        377
                                                                                                                                                                                                                                                                                                                                                                                         310
                                                                                                                                                                                                                                                                                                                                                                                                           317
                                                                                                                                                                                                                                                                                                                                                                                                                              250
                                                                                                                                                                                                                                                                                                                                                                                                                                               257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  190
                                                                                                                                                                                                                        617
                                                                                                                                                                                                                                                           557
                                                                                                                                                                                                                                                                               490
                                                                                                                                                                                                                                                                                                497
                                                                                                                                                                                                                                                                                                                                    437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQGVQRQGVSYSVHAYTGQ
                                                                                                                                                                                                                                                                                            GVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQKSQSSDLLERERESVLR
                                                                                                                                                                                                                                                                                                                  EPSAFGAPGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLSTKQEASKPPRGCPQANR
                                                                                                                                                                                                                                                                                                                                                                 TPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRIPPDAYQPYLSPGTPQL 436
                                                                                                                                                                                                                                                                                                                                                                                                    TDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQREEDHRREGLHVGRAS
                                                                                                                                                                                                                                                                                                                                                                                                                                         EENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLAQEREADLREQRGLRQA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTPLEENVVDREQIDFLAA 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKEMKTYRLDAGDADPRRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       listing
                                                                                                                                                        standard;
                                                                                                                                                                                                        AWTVEDPVDSAPPGORKKEOWYAGI
                                                                                                                                                                                                                   AWTVEDPVDSAPPGQRKKEQWYAGI
                                                                                                                                                                                                                                           REQEVAEERRNALFPEVFSPTPDENSDONSRSSSOASGITGSYSVSESPFFSPIHLHSNV
                                                                                                                                                                                                                                                      REQEVAEERRNALFFEVFSFTFDENSDQNSRSSSQASGITGSYSVSESFFFSFIHLHSNV
                                                                                                                                                                                                                                                                               GVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQKSQSSDLLERERESVLR
                                                                                                                                                                                                                                                                                                                                     EFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLSTKQEASKPPRGCPQANR
                                                                                                                                                                                                                                                                                                                                                       TPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRIPPDAYQPYLSPGTPQL
                                                                                                                                                                                                                                                                                                                                                                                         TDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQREEDHRREGLHVGRAS
                                                                                                                                                                                                                                                                                                                                                                                                                             EENKVRAVPTWAS VQVVDDPGSLAS VESPGTPKETPIEREIRLAQEREADLREQRGLRQA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLANGHVVPIKPQVKGVVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLANGHVVPIKPQVKGVVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTPLEENVVDREQIDFLAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKEMKTYRLDAGDADPRRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQGVQRQGVSYSVHAYTGQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A
                                                                                                                     (first
                                                                                                    SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        were
                                                                                                    ID NO 1252.
                                                                                                                                                        protein;
                                                                                                                       entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         92.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       missing
                                                                                                                                                          679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 625; D
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                         ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the
                                                                                                                                                                                                        634
                                                                                                                                                                                                                         641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        time
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of publication
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 672;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           , 136
                                                                                                                                                                                                                                                                                                                                                                                                                                               316
                                                                                                                                                                                                                                                            616
                                                                                                                                                                                                                                                                                                556
                                                                                                                                                                                                                                                                                                                                     496
                                                                                                                                                                                                                                                                                                                                                                                                             376
                                                                                                                                                                                                                                                                                                                                                                                                                             309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             69
                                                                                                                                                                                                                                           609
                                                                                                                                                                                                                                                                                549
                                                                                                                                                                                                                                                                                                                   489
                                                                                                                                                                                                                                                                                                                                                       429
                                                                                                                                                                                                                                                                                                                                                                                          369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                        닭
                                                                                                            밁
                                                                                                                            S
                                                                                                                                                 문
                                                                                                                                                              Ś
                                                                                                                                                                                   밁
                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                 문
             δ
                                 닭
                                                    S
                                                                                      5
                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                     Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    03-FEB-2000;
27-APR-2000;
20-JUN-2000;
19-JUL-2000;
01-SEP-2000;
15-SEP-2000;
20-OCT-2000;
                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nucleic acids encoding polypeptides with in diagnosis and gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2001-476283/51.
N-PSDB; AAK51723.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tang YT, Liu C,
Ma Y, Zhao QA,
Xue AJ, Yang Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-FEB-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (HYSE-)
                                                                                                                                                                                                                                                                      Local Similarity
                   460
                                                                         340
                                                                                           340
                                                                                                            280
                                                                                                                                                 220
                                                                                                                                                                                     160
                                                                                                                                                                                                       160
                                                                                                                                                                                                                                           100
 460
                                     400
                                                       400
                                                                                                                              280
                                                                                                                                                                                                                                                             580;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HYSEQ INC.
                                                                                                                                                                                                                                                                                                 679
                                                                                                                                                                                                                                                                                                                                                                                                                                               Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000US-00560875.
2000US-00598075.
2000US-00620325.
2000US-00620325.
2000US-00654936.
2000US-00663561.
2000US-00693325.
2000US-00728422.
                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                 A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001WO-US004098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wang D, W
Wejhrman
                                                                                                                                                                                                                                                                     85.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RT,
Wang
n T,
                                                                                                                                                                                                                                                                                                                                                                                                                                              6221pp;
                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                     Score 580;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Asundi V,
J, Zhang Goodrich R
                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                               English.
                                                                                                                                                                                                                                                                   , 0 ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ţ
```

```
cytokine-like activities, useful
                                         Zhou P, )
J, Ren F,
                                                ž
                                         chen
                                         R, Cao
                                        Y;
Wang
                                          ZΨ;
```

The invention relates to polynucleotides (AAKS1456-AAKS3435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cycokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoiesis regulating activity, tissue growth factor activity, immunomodulatory activity and activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and inflammation. Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666 (AAM80020) are omitted as the relevant pages from the sequence listing were missing at the time of publication ç

```
RDAHQGRPTWALRPEDGEDKEMKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVA
                     SPKATMSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQ
                                                                                                   SPAPDARAADPAPEVRKVNRIPPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAAT
SPKATMSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQ
                                                                              SPAPDARAADPAPEVRKVNRIPPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAAT
                                                                                                                                                             PRRERGRPSLYVQRDIVQETQREEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSIL
                                                                                                                                                                                    PRRERGRPSLYVQRDIVQETQREEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSIL
                                                                                                                                                                                                                                              ASVESPGTPKETPIEREIRLAQEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITA
                                                                                                                                                                                                                                                                     ASVESPGTPKETPIEREIRLAQEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITA
                                                                                                                                                                                                                                                                                                                            PAGTTPGASQAPKAFNKPHLANGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSL
                                                                                                                                                                                                                                                                                                                                                        PAGTTPGASQAPKAFNKPHLANGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RDAHQGRPTWALRPEDGEDKEMKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                        519
                                                                                459
                                                                                                                       459
                                                                                                                                                                                                                                                                                                                              279
                                                                                                                                                                                                                                                                                                                                                                                                             219
                                                                                                                                                                                                                                                                                                                                                                                                                                                      219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              159
519
                                                                                                                                                               399
                                                                                                                                                                                                                                                339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

<

```
RRESULT 8
ADG1141
ID ADG11
XX ADG11
XX ADG11
XX ADG11
XX ADG11
XX ADG11
XX Huma
XX Huma
XX Huma
XX Home
XX Hom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ई
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ई
ક
                                                   밁
                                                                                                      S
                                                                                                                                                           Query Match
Best Local S
Matches 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                          coding sequences (ADG14340-ADG14345). The coding sequences are useful for detecting and screening proliferative insulin-producing cells as well as differentiation and proliferation of such cells and their precursors as analogous cells in treatment of e.g. PHHI and diseases due to differentiation proliferation abnormality, diseases of the nervous system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Niwa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; NC1; NC2 neuroprotective
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADG14341;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADG14341 standard; protein; 679
                                                                                                                                                                                                                                                                                                                       and pancreas. The coding sequences are also useful as spontaneous proliferation models of pancreas beta-cells. The novel genes NC1, NC2 NC3 were isolated from the pancreas of PHHI patients, which were used testing for the detection of proliferative insulin-producing cells or pancreas beta-cells by Northern analysis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pamilial persistent hyperinsulinemic hypoglycemia of infancy patient-expressed genes for detecting and screening e.g. prolinsulin-producing cells in treatment of PHHI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human NC2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26-FEB-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; SEQ ID NO 2; 34pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          06-MAR-2003; 2003WO-JP002620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO2003078631-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo
                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention relates to human NC1, NC2 and NC3 proteins and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-MAR-2002; 2002JP-00071592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (KANF ) KANEKA CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        eapiene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2003-767524/72.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    640
  431
                                                                                                                                                                 264;
                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADG14344.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Yamashita K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GINPSDGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GINPSDGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENSDQNSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ENSDQNSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDFVDSAPPGQRKKEQWYA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AQVPHVWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AQVPHYWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPD
                                                                                     HVGRASTFDMVSEGFQPGLRRALSSDSILSPAFDARAADPAFEVRKVNRIFFDAYQPYLS
                                                                                                                                                                                                                                                                          679 AA;
  PGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLSTKQEASKPPRG
                                                     HVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRIPPDAYQPYLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NC2;
                                                                                                                                                           38.9%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NC3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PHHI; pancreas
                                                                                                                                                                 0
                                                                                                                                                                                        Score 264; DB 7; Li
Pred. No. 2.3e-259;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           beta-cell; insulin;
                                                                                                                                                                                                                    Length 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          679
                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          proliferative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           antidiabetic;
                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (PHHI)
                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 579
     490
                                                                                                              430
                                                           430
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  묽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       片
 Best Loca
Matches
            Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gastrointestinal tract; GI tract; cancer; disease; detecti
human; predisposition; treatment; Barret's oesophagus; gas
gastritis; leiomyoma; polyps; Crohn's disease; ulcerative
                                                                                       is used in a method to detect the presence of a target CS198 polynucleotide in a test sample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be used in detecting, diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barraet's oesophagus, gastric ulcer, gastritis, leiomyoma, polyps, Crohn's disease, ulcerative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAW79681;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAW79681
                                                                                                                                                                                                                               New gastrointestinal polynucleotides, CS198, and their detection - used for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastritis.
                                                                                                                                                                                                                                                                                                                            Billing-Medel
Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                    30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                             08-OCT-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        pancreatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human CS198 protein C-terminal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11-JAN-1999
                                                   Sequence 215
                                                                                                                                                                                                       Claim 26; Page 103; 127pp; English.
                                                                                                                                                                                                                                                                                     WPI; 1998-542714/46.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO9844159-A1.
                                                                            colitis,
                                                                                                                                                                                 This
                                                                                                                                                                                                                                                                                                                                                                 (ABBO ) ABBOTT LAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          431
                                                                                                                                                                                sequence represents the C-terminal of the human CS198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                491
 215;
             Similarity
                                                                            and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HLHSNVAWTVEDPVDSAPPGQRKK 634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQKSQSSDLLERE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HLHSNVAWIVEDPVDSAPPGORKK 634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESVLRREQEVAEERRNALFPEVFSPTPDENSDONSRSSSOASGITGSYSVSESFFFSPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQKSQSSDLLERE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVSESPFFSPI
31.7%;
llarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                              1 PA, Cohen M,
Hayden M, Hodo
L, Russell JC,
                                                   Ā
                                                                           pancreatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                           97US-00828855
                                                                                                                                                                                                                                                                                                                                                                                                                      98WO-US006251
                                                                                                                                                                                                                                                                                                              M, Colpitts TL,
Hodges SC, Klass
JC, Stroupe SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     215
  0
 Score 215; DB 2;
Pred. No. 6.9e-21
0; Mismatches (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cancer; disease; detection;
Barret's oesophagus; gastric
              6.9e-210;
                                                                                                                                                                                                                                                                                                                            Friedman PN, G
                         Length 215;
  Indels
                                                                                                                                                                                                                                                                                                                                          Gordon
                                                                                                                                                                                 protein which
  ٥,
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         610
    0
```

S

465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRPRAPDEPQQAQVPH

```
RRESULT 10
AREOT324
ID AREOT324
ID AREOT324
AC AAREOT324
AC AAREOT324
AC AAREOT324
AC AAREOT3X
AC AAREOTX
AC A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
The invention relates to a method of detecting the presence of a target CS 198 polynucleotide comprising contacting the test sample with at least one CS 198-specific polynucleotide. The method is useful for detecting diseases of the gastrointestinal (GI) tract organs, particularly cancer. The CS 198 polynucleotides, polypeptides and antibodies are useful for detecting, diagnosing, staging, monitoring, prognosticating, preventing, treating or determining predisposition to diseases and conditions of the GI tract such as cancer, gastric ulcer. gastriting from a target
                                                                                                                                                                                                                                                                        Detecting the presence of target CS: detecting or diagnosing diseases of contacting test sample with at least
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CS 198; gastrointestinal tract disease; GI tract; cancer; gastritis; Crohn's disease; ulcerative colitis; pancreatitis; Barret's oesophagus; gene therapy; drug screening; human.
                                                                                                                                                                                                                          Claim 17; Page 52-53; 68pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                             Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Billingel PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (HAYD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (GORD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (COLP/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US2001010904-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human CS 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAE07324;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAE07324 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (ROBE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (KLAS/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (BILL/)
                                                                                                                                                                                                                                                                                                                                                                               2001-496163/54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ROBERTS-RAPP RUSSELL J C. STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COLPITTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HAYDEN M.
HODGES S C.
KLASS M R.
KRATOCHVIL J I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GORDON J.
GRANADOS E N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BILLINGEL P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FRIEDMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
                                                                                                                                                                                                                                                                                                                                                                                                                             , Cohen M,
Hayden M,
L, Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein C-terminal portion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97US-00828855.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98US-00050516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7 F V L .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               entry)
                                                                                                                                                                                                                                                                                                                                                                                                                           Colpitts TL, Friedma
Hodges SC, Klass MR,
JC, Stroupe SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ⋛
                                                                                                                                                                                                                                                                        CS 198 polynucleotide, useful for of the gastrointestinal tract, comprises east one CS 198-specific polynucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Friedman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gastric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
```

```
片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  88888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 215; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ulcerative colitis, pancreatitis and Barret's oesophagus. The CS 198 polypeptides are useful as standards or resquents in diagnostic immunoassays, as components or as target sites for various therapies. Antibodies directed against at least one epitope contained within these polypeptides are useful as delivery agents for therapautic agents, in diagnostic tests and for screening for conditions or diseases associated with CS 198, particularly cancer. Monoclonal antibodies may also be used for the generation of chimeric antibodies for therapeutic use. The CS 198 polymucleotide is also useful in gene therapy and drug screening. The method capable of detecting early stage GI tract disease such as cancer. The present sequence is C-terminal portion of human CS 198 polypeptide
                                                                                                                                                                    31-MAR-1997;
30-MAR-1998;
                                                                                                                                                                                                                                                                                                            CS198; cancer diagnosis; cancer staging; cancer monitoring; cancer prognosticating; cancer prevention; cancer; gastrointestinal tract disorder; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
             (BILL/)
(COHE/)
(COLP/)
(FRIE/)
(FREM/)
(GRAN/)
(HAYD/)
(HODG/)
(KLAS/)
(KCAT/)
                                                                                                                                                                                                                                    01-MAY-2003
                                                                                                                                                                                                                                                                                                                                                               Synthetic peptide based on CS198
                                                                                                                                                                                                                                                                                                                                                                                                                 ADA26384;
                                                                                                                                                                                                                                                                                                                                                                                                                                          ADA26384
                                                                                                                                                                                                                                                                                                                                                                                        20-NOV-2003
                                                                                                                                                                                                         23-OCT-2002; 2002US-00278547
                                                                                                                                                                                                                                                            US2003082619-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Н
                                     GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
KLASS M R.
                                                                                                 COLPITTS T :
              KRATOCHVIL J
ROBERTS-RAPP
                                                                                                                                          BILLINGEL P A.
                                                                                                                                COHEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEY FRLRPLRFRAPDEPQQAQVPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                                                                                                                                                                                                                                                                                                                                                                                                                                          standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA,
                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                    97US-00828855.
98US-00050516.
                                                                                                      z r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                           215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 215;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Migmatches
                                                                                                                                                                                                                                                                                                                                                               protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6.9e-210;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CS 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
```

(

```
RESULT 12
ADN17177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                           밁
Query Match
Best Local S
Matches 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cSi98 polynucleotide in a test sample. The method comprises contacting the test sample with at least one CSi98 specific polynucleotide or its complement, and detecting the presence of the target CSi98 polynucleotide in the test sample, where the CSi98-specific polynucleotide has at least 50% identity to a polynucleotide having any of the 27 fully defined sequences of 34-2894 bp (Si-27) given in the specification, or their fragments or complements. The composition and methods are useful in diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition of an individual to, diseases and conditions of the gastrointestinal tract, e.g. cancer and in gene therapy. This is the amino acid sequence of a synthetic peptide based on the predicted human CSi98 protein sequence derived from the CSi98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                detecting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2003-596961/56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Billingel PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 215 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       consensus sequence shown in seq id 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (STRO/)
                                                                                                                         Gastrointestinal tract;
                                                                                                                                                                                17-JUN-2004
           22-AUG-2003; 2003US-00646873
                                         04-MAR-2004
                                                                   US2004043406-A1
                                                                                                                                                    CS198 protein
                                                                                                                                                                                                                                        ADN17177 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         215;
                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                       645
                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                             585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             465
                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STROUPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                       NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGORKKEQWYAGINPS
                                                                                                                                                                                                                                                                                                                                                                                                                                            VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MSPRHLSESSGKFLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                                                                                                                                                                                                                                                                                                                                        DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                           VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MSPRHLSESSGKPLSTKOEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                                                                                                                                                                                                                                                                                                                                                                 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the presence of a target CS198 polynucleotide in a test sample contacting the sample with a CS198 specific polynucleotide and the presence of the target CS198 polynucleotide in the test
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Page
                                                                                                                                                                                                                                                                                                              DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŗ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cohen M,
Hayden MA,
                                                                                                                                                                                (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              describes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             တ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         67pp; English.
                                                                                                                                                                                                                                      protein;
                                                                                                                                                                                entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      31.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a method of detecting the presence of a target a test sample. The method comprises contacting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Colpitts TL,
Hodges SC,
JC, Stroupe
                                                                                                                           GI tract; CS198; cancer; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ç,
                                                                                                                                                                                                                                         215 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Klase MR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Friedman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6.9e-210;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 6;
                                                                                                                                                                                                                                                                                                                                          679
                                                                                                                                                                                                                                                                                                              215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PN, Gordon
Kratochvil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    â'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>..</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                        584
                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

RESULT 13
AAG73987
ID AAG73
XX
AC AAG73
XC AAG73
XX
DT 03-SE
XX
DX Human
XX
Human

AAG73987

AAG73987 standard;

protein;

172

₿

03-SEP-2001

(first

entry)

Human; colon

cancer; colon cancer antigen; diagnosis;

detection;

colon

cancer antigen

protein SEQ ID NO:4751

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOXCCCCCCCCCX PRITTER AND PRINTED PRIN
                                                                                                                                               S
                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                 8
                                          S
                                                                                                  밁
                                                                                                                                                                                                    밁
문
                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to reagents and methods for detecting diseases of the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polynucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of diseases or conditions associated with aberrant expression or activity of the CS198 polypeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 protein used to illustrate the method of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Diagnosing diseases such as cancer of the gastrointestinal tract, by detecting aberrant expression or activity of the CS198 polypeptide, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Billingel PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (COTA/)
(COHE/)
(BITT/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            associated treatment methods.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2004-313754/29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (KLAS/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (HAYD)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (GORD)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (FRIE/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (RUSS/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (KRAT/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HODG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GRAN/
                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                      525
                                                                                                                                                                                                                                                                                                                                                           465
                                                                                                  121
181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17; SEQ
                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                              215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ROBERTS-RAPP I
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COLPITTS T L.
FRIEDMAN P N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COHEN M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BILLINGEL P A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KLASS M R.
KRATOCHVIL J
                                                                                                                                                                                                                                      VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
||||||||||
                                                                                                                                                                                                                                                                                                                                                      MSPRHLSESSGKFLSTKQEASKPFRGCFQANRGVVRWEYFRLRFLRFRAFDEFQQAQVPH
                                                                                                                                                                                                                                                                                                   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                                             DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVBDPVDSAPPGQRKKEQWYAGINPS
DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                                       VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           , Cohen M,
Hayden MA,
L, Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ID NO 47; 67pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97US-00828855.
98US-00050516.
                                                                                                                                                                                                                                                                                                                                                                                                                                      31.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          r o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Colpitts TL,
Hodges SC,
JC, Stroupe
                                                                                                    /SVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 215;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Friedman
Klass MR,
SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                      6.9e-210;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 8;
                                                     679
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PN, Gordon
Kratochvil
                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g;
                                                                                                                                                                                                                                                                                                                                                                                                                   o
;
                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                   524
                                                                                                                                                            644
                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                              584
                                                                                                            180
```

```
묽
                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                   RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cancer-associated nucleic acid molecules (N) and proteins (P), where the proteins are collectively known as colon cancer antigens. The colon cancer antigens have cytostatic activity and can be used in gene therapy and treatment of diseases associated with inappropriate P expression. For caxample, N and P may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate P expression. For caxample, N and P may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of P by expressing inactive proteins or to supplement the patients own production of P. Additionally, N may be used to produce the colon cancer-associated Ps, by inserting the nucleic acids into a host cell and culturing the cell to express the proteins. N and P can be used in the prevention, diagnosis and treatment of colorectal carcinomas and cancers. AAH37196 to AAH37204 and AAB77789 represent sequences used in the exemplification of the present invention. N.B. Pages 666 to 682 and page 7053 of the sequence listing were missing at the olose, meaning no sequences are present for SEQ ID NO:1027 to 1052, 7921 and 7922
                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                 Matches
          16-OCT-2003
                                        US2003194704-A1
                                                                       Homo sapiens
                                                                                                     Human; gene expression; single exon probe; microarray;
alternative splicing event; genomic alteration.
                                                                                                                                                   Human genome
                                                                                                                                                                                      29-JUL-2004
                                                                                                                                                                                                                     ABO60042;
                                                                                                                                                                                                                                                  ABO60042 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 11; Page 6550-6551; 9803pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nucleic acids encoding 4277 human colon cancer-associated polypeptides, useful for preventing, diagnosing and/or treating colorectal cancers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-235357/24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ruben SM, Barash SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-SEP-1999;
03-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-SEP-2000; 2000WO-US026524.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                05-APR-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200122920-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              colorectal carcinoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                   563 EERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVED 622
                                                                                                                                                                                                                                                                                                                                  56
                                                                                                                                                                                                                                                                                                                                                                                                 60;
                                                                                                                                                                                                                                                                                                                                  EERRNALFPEVFSPTPDENSDONSRSSSOASGITGSYSVSESPFFSPIHLHSNVAWTVED
                                                                                                                                                                                                                                                                                                                                                                                              Conservative 0; Mismatches
                                                                                                                                                    derived single exon protein #6276
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ŗ,
                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99US-0157137P.
99US-0163280P.
                                                                                                                                                                                                                                                                                                                                                                                                                                8.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Birse CE,
                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                               Score 60; pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rosen CA;
                                                                                                                                                                                                                                                                                                                                                                                         DB 4; LC.
5.4e-52;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                              Length 172;
                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                  115
                                                                                                                                                                                                                                                                                                                                                                                                0
```

RESULT 15
AAG75071
ID AAG75
XX
AC AAG75
XX

AAG75071 standard; protein; 57

B

0,

AAG75071

```
밁
          S
                       Best Loc
Matches
                                  Query Match
                                                                                                                                                                                                                                                                                         New human genome-derived single exon nucleic acid probes useful for human gene expression analysis, for identifying or characterizing alternative splicing events, for assessing genomic alterations or as tools for
                                                                                                                                                                                                                                                                                                                                                               03-APR-2002; 2002US-00029386.
                                                                                                                                                                                                                                                                                                                                                                           03-APR-2002; 2002US-00029386.
                                             Sequence
                                                                                                                                                                                                                                                                         Claim 45; SEQ ID NO 33676; 80pp; English.
                                                                                                                                                                                                                                                                                    surveying tissues.
                                                                                                                                                                                                                                                                                                                 WPI; 2004-119264/12.
                                                         seqdata.uspto.gov/sequence.html?DocID=20030194704
                                                                                                                                                                                                                                                                                                                                       (PENN/) PENN S G.
(RANK/) RANK D R.
(HANZ/) HANZEL D K.
                            Local
        595 ITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQW 637
                       1 Similarity
43; Conserv
                                              43
ITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQW
                                                                                                                                                                                                                                                                                                                            Rank DR,
                      6.3%;
ilarity 100.0%;
Conservative (
                                              ξ
                                                                                                                                                                                                                                                                                                                             Hanzel DK,
                       0
                            Score 43; DB 8; L; Pred. No. 3.2e-35;
                       Mismatches
                                 Length 43;
                       Indels
                       0
```

03-SEP-2001

(first entry)

```
RESULT 16
AAW79677
ID AAW79
XX AAW79
AC AAW79
XX TII-JA
XX DE Synth
XX DE Synth
XX Gast:
XW Dumai
                                                                                                                                                                                                                                                                                                                                                            cc cancer-associated nucleic acid molecules (N) and proteins (P), where the CC proteins are collectively known as colon cancer antigens. The colon cancer antigens have cytostatic activity and can be used in gene therapy CC and treatment of diseases associated with inappropriate P expression. For CC example, N and P may be used to treat disorders associated with decreased CC expression by rectifying mutations or deletions in a patient's genome CC supplement the patients own production of P. Additionally, N may be used to produce the colon cancer-associated P, by inserting the nucleic acids into a host cell and culturing the cell to express the proteins or to CC can be used in the prevention, diagnosis and treatment of colorectal CC carcinomas and cancers. AAH37196 to AAH37204 and AAB77789 represent CC pages 666 to 682 and page 7053 of the sequence listing were missing at time of publication, meaning no sequences are present for SEQ ID NO:1027 CC to 1052, 7921 and 7922
                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                              Query Match
Best Local (
                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nucleic acids encoding 4277 human colon cancer-associated polypeptides, useful for preventing, diagnosing and/or treating colorectal cancers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-PSDB; AAH34476.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ruben
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-SEP-1999;
03-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          05-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200122920-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    colorectal carcinoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; colon cancer; colon cancer antigen; diagnosis; detection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human colon cancer antigen protein SEQ ID NO:5835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-235357/24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-SEP-2000; 2000WO-US026524.
Gastrointestinal tract; GI tract; cancer; disease; detection; (human; predisposition; treatment; Barret's oesophagus; gastric gastritis; leiomyoma; polyps; Crohn's disease; ulcerative coli
                                                                                                                                                                                                                                                                                                                                                           Sequence 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAH32943 to AAH37195 and AAG73514 to AAG77788 represent human colon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (HUMA-) HUMAN GENOME SCI INC
                                                                Synthetic CS198 derived peptide
                                                                                              11-JAN-1999
                                                                                                                                                          AAW79677 standard; protein; 36 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SM,
                                                                                                                                                                                                                                                                  305 ADLREGRGLROATDHOELVEIPTRPLLTKLSLITAPRR 342
                                                                                                                                                                                                                                                                                               38;
                                                                                                                                                                                                                                     Н
                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                     ADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Barash SC,
                                                                                                                                                                                                                                                                                                                                                              ξ
ξ
                                                                                                                                                                                                                                                                                                 Conservative
                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99US-0157137P
99US-0163280P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7350; 9803pp; English.
                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Birse CE,
                                                                                                                                                                                                                                                                                                 <u>0</u>
                                                                                                                                                                                                                                                                                                               Score 38;
Pred. No.
                                                                 世
                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rogen
                                                                                                                                                                                                                                                                                                               DB 4; Le
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                              Length 57;
                                                                                                                                                                                                                                       38
                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                  0
                   ulcer;
                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                    0
```

```
RESULT 17
AAE07320
ID AAE07
XX
AC AAE07
XX
DT 06-NO
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              X Z X S X Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
문
                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New gastrointestinal polymucleotides, CS198, and their detection - used for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       used in detecting, diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oesophagus, gastric ulcer, gastritis, leiomyoma, polyps, Crohn's disease, ulcerative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAW79677-W79680 are synthetic CS198 derived peptide fragments which are used in a method to detect the presence of a target human CS198 polynucleotide in a test sample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Granados
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Billing-Medel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pancreatitis
                                                                                                                                                           CS 198; gastrointestinal tract disease; GI tract; cancer; gastric ulcer; gastritis; Crohn's disease; ulcerative colitis; pancreatitis; Barret's oesophagus; gene therapy; drug screening; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 36 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 26; Page 102; 127pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1998-542714/46.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-MAR-1998;
                                                                                                                                                                                                                                      06-NOV-2001
                                                                                                                                                                                                                                                                                      AAE07320 standard;
                                     31-MAR-1997;
                                                            30-MAR-1998;
                                                                                                              US2001010904-A1
                                                                                                                                                                                                              Human
                                                                                                                                                                                                                                                               AAE07320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              colitis,
                                                                                     02-AUG-2001
                                                                                                                                     Homo sapiens
(BILL/) BILLINGEL P A. (COHE/) COHEN M.
                                                                                                                                                                                                                                                                                                                                                                            465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 500
                                                                                                                                                                                                               CS 198
                                                                                                                                                                                                                                                                                                                                                                                                   36;
                                                                                                                                                                                                                                                                                                                                                      -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EZ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and pancreatitis
                                                                                                                                                                                                                                                                                                                                                      MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                              peptide
                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hayden M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97US-00828855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98WO-US006251
                                      97US-00828855
                                                               98US-00050516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Russell JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cohen M,
                                                                                                                                                                                                                                                                                      peptide; 36
                                                                                                                                                                                                                                                                                                                                                                                                 5.3%; ==
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  M, Colpitts TL,
Hodges SC, Klass
                                                                                                                                                                                                                                                                                                                                                                                                                 Score 36; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Stroupe SD;
                                                                                                                                                                                                                                                                                        A
                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2; Lo
3.7e-28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₹,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Friedman PN,
                                                                                                                                                                                                                                                                                                                                                                                                                             Length 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kratochvil
                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gordon J;
                                                                                                                                                                                                                                                                                                                                                                                                       °.
                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           for
```

```
)
$8$$$$$$$$$$$$$$
                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                The CS 198 polynucleotides, polypeptides and antibodies are useful for contenting, diagnosing, staging, monitoring, prognosticating, preventing, creating, or determining predisposition to diseases and conditions of the cS 198 polypeptides are useful as cancer, gastric ulcer, gastritis, Crohn's disease, cC ulcerative colitis, pancreatitis and Barret's oesophagus. The CS 198 polypeptides are useful as standards or reagents in diagnostic immunoassays, as components or as target sites for various therapies. CC Antibodies directed against at least one epitope contained within these cC polypeptides are useful as delivery agents for therapeutic agents, in CC polypeptides are useful as delivery agents for therapeutic agents, in CC polypeptides are useful as delivery agents for therapeutic agents, in CC polypeptides and for screening for conditions or diseases associated CC with CS 198, particularly cancer. Monoclonal antibodies may also be used CC polymucleotide is also useful in gene therapy and drug screening. The CC method of the invention provides an alternative, non-surgical diagnostic method capable of detecting early stage GI tract disease such as cancer. Consensus sequence is a peptide derived from human CS 198 polypeptide
                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to a method of detecting the presence of a target CS 198 polynucleotide comprising contacting the test sample with at leading CS 198-specific polynucleotide. The method is useful for detecting diseases of the gastrointestinal (GI) tract organs, particularly cances
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, comprises contacting test sample with at least one CS 198-specific polynucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (COLP/)
(FRIE/)
(GORD/)
(GRAN/)
                      Synthetic;
                                                     gastrointestinal tract (
                                                                                    CS198; cancer diagnosis; cancer staging; cancer monitoring;
                                                                                                                  Synthetic peptide
                                                                                                                                                 20-NOV-2003
                                                                                                                                                                                ADA26380;
                                                                                                                                                                                                           ADA26380 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 17; Page 51; 68pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Billingel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (HAYD/)
(HODG/)
(KLAS/)
(KRAT/)
(ROBE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001-496163/54
                                                                                                                                                                                                                                                                                                                      465
                                                                                                                                                                                                                                                                                         Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ROBERTS-RAPP I
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HAYDEN M.
HODGES S C.
KLASS M R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FRIEDMAN
GORDON J.
GRANADOS
                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COLPITTS
                                                                                                                                                                                                                                                                                                                      MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 500
                                                                                                                                                                                                                                                                                                                                                                                                                36 AA;
                                                                                                                                                                                                                                                                                         MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PA,
                                                                                                                                                                                                                                                                                                                                                   5.3%;
llarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , Cohen M,
Hayden M,
L, Russell
                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PH
Z.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N
N
                                                                                                                  based on
                                                                                                                                                                                                             protein;
                                                      ; cancer prevention;
disorder; gene ther;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    úĊ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Colpitts TL, Friedma
Hodges SC, Klass MR,
                                                                                                                  CS198 protein
                                                                                                                                                                                                              36
                                                                                                                                                                                                                                                                                                                                                     <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                   Score 36; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Stroupe
                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                     gene
                                                      therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Friedman
                                                                                                                                                                                                                                                                                                                                                                  DB 4; Le
3.7e-28;
                                                                                                                  #1.
                                                                     cancer;
                                                                                                                                                                                                                                                                                                                                                                                Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PN, Gordon J;
Kratochvil JD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  particularly cancer.
                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             at least
                                                                                                                                                                                                                                                                                                                                                      0
```

RESULT 19 ADN17173

**EXEXEXEX** 

17-JUN-2004

(first entry)

ADN17173 ADN17173

standard;

peptide;

CS198 peptide

#1.

Gastrointestinal tract; GI tract; CS198; cancer; gene therapy.

```
밁
                       Ś
                                                                                                     Matches
                                                             Query Match
Best Local
                                                                                                                          The invention describes a method of detecting the presence of a target CS198 polynucleotide in a test sample. The method comprises contacting the test sample with at least one CS198 specific polynucleotide or its complement, and detecting the presence of the target CS198 polynucleotide in the test sample, where the CS198-specific polynucleotide has at least 50% identity to a polynucleotide having any of the 27 fully defined sequences of 34-2894 bp (S1-27) given in the specification, or their fragments or complements. The composition and methods are useful in diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition of an individual to, diseases and conditions of the gastrointestinal tract, e.g. cancer and in gene therapy. This is the amino acid sequence of a synthetic peptide based on the predicted human CS198 protein sequence derived from the CS198 consensus sequence shown in seq id 27.
                                                                                                                                                                                                                                                                                                                                                               Detecting the presence of a target CS198 polynucleotide in a test sample comprises contacting the sample with a CS198 specific polynucleotide and detecting the presence of the target CS198 polynucleotide in the test
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Billingel PA,
Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31-MAR-1997;
30-MAR-1998;
                                                                                                   Sequence 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US2003082619-A1
                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2003-596961/56.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (COHE/)
(COLP/)
(FRIE/)
(GORD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-OCT-2002; 2002US-00278547
                                                                                                                                                                                                                                                                                                                           Claim 17; Page 51; 67pp; English
                                                                                                                                                                                                                                                                                                                                                     sample.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Roberts-Rapp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (ROBE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (HAYD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (GRAN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (BILL/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KRAT/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KLAS/)
              465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 500
                                                   36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COLPITTS T L.
FRIEDMAN P N.
\vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GRANADOS E N.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
KLASS M R.
KRATOCHVIL J I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BILLINGEL P A.
MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                    A
                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                              ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hayden
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97US-00828855
98US-00050516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cohen
                                                                                                                                                                                                                                                                                                                                                                                                                                              Ohen M,
lyden MA,
Russell
                                                             5.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ۲D
                                                                                                                                                                                                                                                                                                                                                                                                                                              Colpitts TL,
Hodges SC,
I JC, Stroupe
                                                  ٥,
                                                               Score 36;
Pred. No.
                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                              , Friedman PN,
Klass MR, Kra
e SD;
                                                               DB 6; Le
 36
                                                   <u>,,</u>
                                                                            Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kratochvil
                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gordon
                                                                                                                                                                                                                                                                                                                                                                                                                                                             g;
                                                   <u>,</u>
                                                    Gaps
                                                    0
```

ĺ

```
RESULT 20
AAW79679
ID AAW
XX
AAW
XX
DT 11---
XX
DT 11---
XX
DX Synt
XX
DX Synt
XX
DX Gast
KW Gast
KW Gast
KW Gast
KW Gast
                                                                                                                                                                                                                                                                                 뭐
                                                                                                                                                                                                            S
                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Billingel PA, C
Granados EN, Ha
Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                             The invention relates to reagents and methods for detecting diseases of the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polynucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of diseases or conditions associated with aberrant expression or activity of the CS198 polypeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 peptide used to illustrate the method of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31-MAR-1997;
30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22-AUG-2003; 2003US-00646873.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US2004043406-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unidentified
          human; predisposition; gastritis; leiomyoma; |
             Gastrointestinal tract; GI tract; cancer; disease; detection; on human; predisposition; treatment; Barret's oesophagus; gastric gastrictis; leiomyoma; polyps; Crohn's disease; ulcerative colity.
                                                                                                                                                                                                                                                                              Sequence 36
                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2004-313754/29.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (GORD/)
(GRAN/)
(HAYD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (COLP/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                associated treatment methods.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Diagnosing diseases such
                                                          Synthetic CS198 derived
                                                                                 11-JAN-1999
                                                                                                       AAW79679
                                                                                                                              AAW79679 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (STRO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (KRAT/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FRIE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BILL/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KLAS/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HODG/)
                                                                                                                                                  20
                                                                                                                                                                                                   465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COLPITTS T L.
FRIEDMAN P N.
                                                                                                                                                                                       μ
                                                                                                                                                                                                                                    36,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KLASS M R.
KRATOCHVIL J D.
ROBERTS-RAPP L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GORDON J.
GRANADOS B N.
HAYDEN M A.
HODGES S C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BILLINGEL P A. COHEN M.
                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                       MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                           g diseases such as cancer of the gastrointestinal tract, by aberrant expression or activity of the CS198 polypeptide, and
                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 43; 67pp;
                                                                                                                                                                                                                                                                                 $
                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , Cohen M,
Hayden MA,
L, Russell
                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98US-00050516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97US-00828855
                                                                                                                                                                                                                                               5.3%;
100.0%;
                                                                                                                              protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Colpitts TL,
Hodges SC,
JC, Stroupe
                                                         peptide
                                                                                                                              35
                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                Score 36;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                         English.
                                                                                                                              ₿
                                                           #3
                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Klass
SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Friedman
Klass MR,
                                                                                                                                                                                                                                                DB 8; L
3.7e-28;
                                                                                                                                                                                        36
                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                          Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PN, Gordon
Kratochvil
                                                                                                                                                                                                                                     Indels
               colitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 មូដ
                                                                                                                                                                                                                                     0
                         ulcer;
                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                     0
```

```
RESULT 21
AAE07322
ID AAE07
                                                                                                                                                                                                                                                                                                                                                                                                                                S
 닭
                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAW79677-W79680 are synthetic CS198 derived peptide fragments which are used in a method to detect the presence of a target human CS198 polynucleotide in a test sample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be used in detecting, diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oesophagus, gastric ulcer, gastritis, leiomyoma, polyps, Crohn's disease, ulcerative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New gastrointestinal polynucleotides, CS198, and their of developing products for the diagnosis and treatment gastrointestinal disorders, e.g. cancers, gastric ulcer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Billing-Medel
Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic
(COLP/)
                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 35 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1998-542714/46.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         W09844159-A1
                                                                                                                                                                      CS 198; gastrointestinal tract disease; GI tract; cancer; gastric ulcer; gastritis; Crohn's disease; ulcerative colitis; pancreatitis;
                                                                   30-MAR-1998;
                                                                                                               US2001010904-A1
                                                                                                                                      Homo sapiens
                                                                                                                                                             Barret's
                                                                                                                                                                                                          Human
                                                                                                                                                                                                                                 06-NOV-2001
                                                                                                                                                                                                                                                       AAE07322;
                                                                                                                                                                                                                                                                             AAE07322 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      colitis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (ABBO ) ABBOTT LAB
                                             31-MAR-1997;
                                                                                           02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                     568 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
                                                                                                                                                                                                          င္သ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26; Page 103; 127pp; English.
) BILLINGEL P A.
) COHEN M.
) COLPITTS T L.
                                                                                                                                                                                                                                                                                                                                                                                   35,
                                                                                                                                                                                                                                                                                                                                     1 ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS
                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                     and pancreatitis
                                                                                                                                                             oesopnagus;
                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                         peptide
                                                                                                                                                                                                                                 (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hayden M, Hod
L, Russell JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97US-00828855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98WO-US006251
                                              97US-00828855
                                                                    98US-00050516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cohen M,
                                                                                                                                                                                                                                                                              peptide;
                                                                                                                                                                                                                                 entry)
                                                                                                                                                                                                                                                                                                                                                                                             5.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        polynucleotides, CS198, and their detection - used cts for the diagnosis and treatment of
                                                                                                                                                             gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                M, Colpitts TL,
Hodges SC, Klass
JC, Stroupe SD;
                                                                                                                                                             therapy;
                                                                                                                                                                                                                                                                               35
                                                                                                                                                                                                                                                                                                                                                                                   <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                             Score 35;
Pred. No.
                                                                                                                                                                                                                                                                               ₽
                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                               DB 2; Lt 3.8e-27;
                                                                                                                                                               screening;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Friedman PN, G
MR, Kratochvil
                                                                                                                                                                                                                                                                                                                                                              602
                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                           Length 35;
                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gordon
il JD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gastritis.
                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ۲,
```

```
RESULT 22
ADA26382
ID ADA26
XX ADA26
XX ADA26
XX ADA26
XX Synth
XX CS198
KW CS198
KW CS198
KW Gance
                                                                                                                                                                                                                                                                                                                             맑
                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                SXCCCCCCCCCCCCCCCCXSXTTTTXXXXTHII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to a method of detecting the presence of a target CC CS 198 polynucleotide comprising contacting the test sample with at least one CS 198 specific polynucleotide. The method is useful for detecting CC diseases of the gastrointestinal (GI) tract organs, particularly cancer. CT The CS 198 polynucleotides, polypeptides and antibodies are useful for detecting, diagnosing, staging, monitoring, prognosticating, preventing, CC treating or determining predisposition to disease and conditions of the CG I tract such as cancer, gastric ulcer, gastritis, Crohn's disease, CC ulcerative colitis, pancreatitis and Barret's oseophagus. The CS 198 CC polypeptides are useful as standards or reagents in diagnostic immunoassays, as components or as target sites for various therapies. CC immunoassays, as components or as target sites for various therapies. CC immunoassays, as components or as target sites for various therapies. CC diagnostic tests and for screening for conditions or diseases associated CC with CS 198, particularly cancer. Monoclonal antibodies may also be used CC polypucleotide is also useful in gene therapy and drug screening. The CS 198 polypucleotide is also useful in gene therapy and drug screening. The CC method capable of detecting early stage GI tract disease such as cancer. Consensus seniorece is a peptide derived from human CS 198 polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                               CS198; cancer diagnosis; cancer staging; cancer monitoring; cancer prognosticating; cancer prevention; cancer; gastrointestinal tract disorder; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, comprises contacting test sample with at least one CS 198-specific polynucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI;
 US2003082619-A1.
                                                                                                                                   Synthetic peptide based on
                                                                                                                                                                      20-NOV-2003
                                                                                                                                                                                                        ADA26382
                                                                                                                                                                                                                                        ADA26382 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 35 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                consensus sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 17; Page 52; 68pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Billingel PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (KCAS/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (FRIE/)
(GORD/)
(GRAN/)
(HAYD/)
(HODG/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (ROBE/)
                                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001-496163/54
                                                                                                                                                                                                                                                                                                                                             568 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 602
                                                                                                                                                                                                                                                                                                                                                                                             1 Similarity 35; Conserv
                                                                                                                                                                                                                                                                                                                             ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ROBERTS-RAPP |
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FRIEDMAN
GORDON J.
GRANADOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HAYDEN M.
HODGES S C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KLASS M R.
KRATOCHVIL J
                                                                                                                                                                                                                                                                                                                             ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                , Cohen M,
Hayden M,
                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PZ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Russell
                                                                                                                                                                                                                                                                                                                                                              5.2%; Pred. No.
100.0%; Pred. No.
1ve 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Colpitts TL, Friedma
Hodges SC, Klass MR,
JC, Stroupe SD;
                                                                                                                                   CS198 protein
                                                                                                                                                                                                                                         35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Friedman
                                                                                                                                                                                                                                                                                                                                                                                                             DB 4; Le
                                                                                                                                                                                                                                                                                                                             35
                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                            Length 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PN, Gordon J;
Kratochvil JD;
                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
RESULT 23
ADN17175
ID ADN17
XX
AC ADN17
XX
TX
AC ADN17
XX
XX
XX
T17-J1
XX
XX
XX
XX
CS198
XX
XX
XX
Gast1
                                                                                                                                                                               유
                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                       The invention describes a method of detecting the presence of a target CS198 polynucleotide in a test sample. The method comprises contacting the test sample with at least one CS198 specific polynucleotide or its complement, and detecting the presence of the target CS198 polynucleotide in the test sample, where the CS198-specific polynucleotide has at least 50% identity to a polynucleotide having any of the 27 fully defined sequences of 34-2894 bp (S1-27) given in the specification, or their fragments or complements. The composition and methods are useful in diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition of an individual to, diseases and conditions of the gastrointestinal tract, e.g. cancer and in gene therapy. This is the amino acid sequence of a synthetic peptide based on the predicted human CS198 protein sequence derived from the CS198 consensus sequence shown in seq id 27.
                                     CS198 peptide
                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Detecting the presence of a target CS198 polynucleotide in a test sample comprises contacting the sample with a CS198 specific polynucleotide and detecting the presence of the target CS198 polynucleotide in the test
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Billingel PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31-MAR-1997;
30-MAR-1998;
           Gastrointestinal tract; GI tract; CS198;
                                                               17-JUN-2004
                                                                                                                 ADN17175 standard; peptide; 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2003-596961/56.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (ROBE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 17; Page 51; 67pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (COLP/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (HODG/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (HAYD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (GRAN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GORD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KRAT/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KLAS/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COHE/)
                                                                                                                                                                                                         895
                                                                                                                                                                               Н
                                                                                                                                                                                                                               l Similarity
35; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COLPITTS T L.
FRIEDMAN P N.
GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KLASS M R.
KRATOCHVIL J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BILLINGEL P A.
                                                                                                                                                                                                                                                                                   35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COHEN
                                                                                                                                                                                               ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
                                                                                                                                                                               ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
                                                                                                                                                                                                                               5.2%; So ilarity 100.0%; I Conservative 0;
                                                                                                                                                                                                                                                                                  A
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2002US-00278547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cohen M,
Hayden MA,
                                                              (first
                                      #3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97US-00828855.
98US-00050516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  r o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Colpitts TL,
Hodges SC,
l JC, Stroupe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       English
                                                                                                                                                                                                                               Score 35; DB; Pred. No. 3.8
                                                                                                                 ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Friedman
Klass MR,
SD;
                                                                                                                                                                                                                                         DB 6; L
              cancer;
                                                                                                                                                                                 35
                                                                                                                                                                                                                                                         Length 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PN, Gordon
Kratochvil
           gene therapy
                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a i
                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                  0
```

```
RESULT 24
AAW79678
ID AAW79
XX
AC AAW79
XX
DT 11-JJ
XX
DE Synt!
XX
KW Gast
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SX CCCCCCCCCX BX X T T T T X R X R R R R R R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R X R R X R R X R R X R R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X X R X R X X R X R X X R X R X X R X X R X X R X X R X X R X X X
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Diagnosing diseases such as cancer of the detecting aberrant expression or activity associated treatment methods.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to reagents and methods for detecting diseases of the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polynucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of diseases or conditions associated with aberrant expression or activity of the CS198 polypeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The prevention are useful as CS198 peptide used to illustrate the method of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2004-313754/29.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Billingel PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31-MAR-1997;
30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22-AUG-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            04-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US2004043406-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unidentified
                           Gastrointestinal tract; GI tract; cancer; disease; detection; CS198; human; predisposition; treatment; Barret's oesophagus; gastric ulcer. gastritis; leiomyoma; polyps; Crohn's disease; ulcerative colitis; pancreatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (HAYD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (COLP/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (ROBE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (FRIE/)
                                                                                                                                                Synthetic CS198 derived peptide
                                                                                                                                                                                                11-JAN-1999
                                                                                                                                                                                                                                                                                              AAW79678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (GRAN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .nvention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KRAT/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                              568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           l Similarity
35, Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
                                                                                                                                                                                                                                                                                                                                                                                                                    <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KRATOCHVIL J
ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BILLINGEL P A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KLASS M R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COLPITTS T L.
FRIEDMAN P N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COHEN M
                                                                                                                                                                                                                                                                                            standard; protein; 31
                                                                                                                                                                                                                                                                                                                                                                                                                                               ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
                                                                                                                                                                                                                                                                                                                                                                                                                    ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 45; 67pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            , Cohen M,
Hayden MA,
L, Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2003US-00646873
                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97US-00828855.
98US-00050516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Colpitts TL,
Hodges SC,
L JC, Stroupe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 35;
Pred. No.
                                                                                                                                                                                                                                                                                                 ⋛
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Klass MR,
SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Friedman PN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .8e-27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gastrointestinal tract, b of the CS198 polypeptide,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                    35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PN, Gordon J;
Kratochvil JD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   γĄ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
RESULT 25
AAE07321
ID AAE07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
     PAR PRESENTATION OF THE PART O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 31; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAW79677-W79680 are synthetic CS198 derived peptide fragments which are used in a method to detect the presence of a target human CS198 polynucleotide in a test sample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be used in detecting, diagnosing, staging, monitoring, prognosticating, used in detecting, or determining the predisposition to disease and conditions of the GI tract, such as GI tract cancer, Barret's oesophagus, gastric ulcer, gastritis, leiomyoma, polyps, Crohn's disease, ulcerative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New gastrointestinal polynucleotides, CS198, and their detection for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 26; Page 102; 127pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Billing-Medel
Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             08-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             W09844159-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic
(BILL/)
(COHE/)
(COLP/)
(FRIE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1998-542714/46.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (ABBO ) ABBOTT LAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                            CS 198; gastrointestinal tract disease; GI tract; cancer; gastric gastritis; Crohn's disease; ulcerative colitis; pancreatitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human CS 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAE07321;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAE07321 standard;
                                                                                                                          31-MAR-1997;
                                                                                                                                                                                                                                                                         US2001010904-A1
                                                                                                                                                                                                                                                                                                                                                                        Barret's oesophagus;
                                                                                                                                                                           30-MAR-1998;
                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     μ
  BILLINGEL P A. COHEN M. COLPITTS T L. FRIEDMAN P N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RLQKSQSSDLLERERESVLRREQEVAEERRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RLOKSOSSDLLERERESVLRREQEVAEERRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and pancreatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PA, Cohen M, Colpitts TL,
Hayden M, Hodges SC, Klas
L, Russell JC, Stroupe SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97US-00828855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98WO-US006251
                                                                                                                             97US-00828855
                                                                                                                                                                           98US-00050516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.6%;
                                                                                                                                                                                                                                                                                                                                                                        gene therapy; drug screening;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 31;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Klass
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 2;
4e-23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₹,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Friedman PN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kratochvil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gordon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gastritis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   used
```

```
RESULT 26
ADA26381
                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to a method of detecting the presence of a target CC S198 molynucleotide comprising contacting the test sample with at least one CS 198-mpecific polynucleotide. The method is useful for detecting CC diseases of the gastrointestinal (GI) tract organs, particularly cancer. CC The CS 198 molynucleotides, polynoptides and antibodies are useful for detecting, disgnosing, staging, monitoring, promosticating, preventing, treating or determining predisposition to diseases and conditions of the CG Itract such as cancer, gastric ulcer gastritis, Crohn's disease, CC ulcerative colitis, pancrearitis and Barrer's oscophagus. The CS 198 pancrearitis and Barrer's oscophagus. The CS 198 CC polypeptides are useful as standards or reagents in diagnostic diseases, as components or as target sites for various therapies. CC immunoassays, as components or as target sites for various therapies. CC diagnostic tests and for screening for conditions or diseases associated CC with CS 198, particularly cancer. Monoclonal antibodies may also be used CC polypucities is also useful in gene therapy and drug screening. The CS 198 polypucitotide is also useful in gene therapy and drug screening. The CC method capable of detecting early stage GI tract disease such as cancer. The present sequence is a peptide derived from human CS 198 polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local &
                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                        cancer prognosticating; cancer prevention; gastrointestinal tract disorder; gene there
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, comprise contacting test sample with at least one CS 198-specific polynucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (GORD/)
(GRAN/)
(HAYD/)
(HODG/)
(KLAS/)
(KRAT/)
(ROBE/)
               US2003082619-A1
                                            Synthetic;.
                                                                                                      CS198; cancer diagnosis; cancer staging; cancer monitoring;
                                                                                                                                   Synthetic peptide
                                                                                                                                                                   20-NOV-2003
                                                                                                                                                                                                 ADA26381;
                                                                                                                                                                                                                             ADA26381 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 17; Page 51; 68pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Granados
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Billingel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001-496163/54.
                                                                                                                                                                                                                                                                                                                         537 RLOKSOSSDLLERERESVLRREQEVAEERRN 567
                                                                                                                                                                                                                                                                                                        <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                     31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ROBERTS-RAPP I
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HAYDEN
HODGES
                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KLASS M R.
KRATOCHVIL J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GRANADOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         恩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PA,
                                                                                                                                                                                                                                                                                                                                                                                                                              ₹
                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , Cohen M,
Hayden M,
L, Russell
                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E
                                                                                                                                     based on CS198 protein #2
                                                                                                                                                                                                                             protein;
                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                4.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Colpitts TL, Frie
Hodges SC, Klass
JC, Stroupe SD;
                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                  Score 31;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Friedman
                                                                                                                                                                                                                                                                                                                                                                                  DB 4;
4e-23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₹,
                                                                                        cancer;
                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                Length 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PN, Gordon J;
Kratochvil JD;
                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               comprises
                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                    0
```

```
ADN17174
ID ADN17174
ID ADN17
AC ADN17
XX ADN17
XX T1-JU
XX T1-JU
XX Gast1
XX Gast1
XX Gast1
XX Unide
                                                                                                                                                                                                                                                                                             SXCCCCCCCCCCCX PX PTTTXXXXIIIX
                                                                                                                                                                                            밁
                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                               The invention describes a method of detecting the presence of a target CC CS198 polynucleotide in a test sample. The method comprises contacting CC the test sample with at least one CS198 specific polynucleotide or its CC complement, and detecting the presence of the target CS198 polynucleotide in the test sample, where the CS198-specific polynucleotide has at least CC soft identity to a polynucleotide having any of the 27 fully defined CC sequences of 34-2894 bp (S1-27) given in the specification, or their CC fragments or complements. The composition and methods are useful in CC diagnosing, staging, monitoring, prognosticating, preventing or treating, CC or determining the predisposition of an individual to, diseases and CC conditions of the gastrointestinal tract, e.g. cancer and in gene CC therapy. This is the amino acid sequence of a synthetic peptide based on CC consensus sequence shown in seq id 27.
                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Detecting the presence of a target CS198 polynucleotide in a test sample comprises contacting the sample with a CS198 specific polynucleotide and detecting the presence of the target CS198 polynucleotide in the test
                                                                            17-JUN-2004
                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Billingel PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31-MAR-1997;
30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAY-2003
  Unidentified
                          Gastrointestinal tract; GI tract; CS198; cancer; gene therapy.
                                                CS198 peptide
                                                                                                                            ADN17174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 17; Page 51; 67pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sample.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2003-596961/56.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (HAYD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (BILL/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (ROBE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (KLAS/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (GRAN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FRIE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (COLP/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KRAT/)
                                                                                                                                                                                                                     537
                                                                                                                                                                                                                                           31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KRATOCHVIL J I
ROBERTS-RAPP I
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
KLASS M R.
                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COLPITTS T L. FRIEDMAN P N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BILLINGEL P A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COHEN
                                                                                                                                                                                                         RLQKSQSSDLLERERESVLRREQEVAEERRN
                                                                                                                                                                                                                                                                                             3
                                                                                                                              standard;
                                                                                                                                                                                            RLQKSQSSDLLERERESVLRREQEVAEERRN
                                                                                                                                                                                                                                                                                             A
A
                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2002US-00278547
                                                                            (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hayden
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cohen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97US-00828855.
98US-00050516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Russell
                                                                                                                           peptide;
                                                                            entry)
                                                                                                                                                                                                                                                       4.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ¥,×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Colpitts TL,
, Hodges SC,
1 JC, Stroupe
                                                                                                                              3
                                                                                                                                                                                                                                           <u>.</u>
                                                                                                                                                                                                                                                       Score 31;
Pred. No.
                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Klass MR,
SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Friedman PN,
                                                                                                                                                                                                                                                        DB 6;
4e-23;
                                                                                                                                                                                                                     567
                                                                                                                                                                                            31
                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                    Length 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kratochvil
                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g,
                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                              Gaps
```

```
AAW79680
XX
AC AAW7
XX
AC AAW7
XX
DT 11-:
XX
DE Synt
XX
KW Gast
KW humm
KW humm
XX
OS Synt
                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                              RESULT 28
                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 31
                                                                                                                                                                                                                                                                                                                                           The invention relates to reagents and methods for detecting diseases of the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polymucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of diseases or conditions associated with aberrant expression or activity of the CS198 polymeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 peptide used to illustrate the method of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Billingel PA, Cohen M,
Granados EN, Hayden MA,
Roberts-Rapp L, Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22-AUG-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               04-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US2004043406-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Diagnosing diseases such as cancer of the gastrointestinal tract, by detecting aberrant expression or activity of the CS198 polypeptide, associated treatment methods.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (COTA/)
(COHE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-MAR-1998;
                                  Gastrointestinal tract; GI tract; cancer; disease; detection; CS198; human; predisposition; treatment; Barret's oesophagus; gastric ulcer gastritis; leiomyoma; polyps; Crohn's disease; ulcerative colitis;
                                                                                                                                                                                                                                                                                                            Sequence 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 17; SEQ ID NO 44; 67pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (FRIE/)
(GORD/)
(GRAN/)
 Synthetic
                        pancreatitis.
                                                                                  Synthetic
                                                                                                        11-JAN-1999
                                                                                                                                                       AAW79680 standard;
                                                                                                                                                                                                                                                                                                                                   invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (KEAS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (HAYD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KRAT/)
                                                                                                                                                                                                                                        537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COLPITTS T L.
FRIEDMAN P N.
GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
                                                                                                                                                                                                                 μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KRATOCHVIL J
ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COHEN M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BILLINGEL P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KLASS M R.
                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                 RLQKSQSSDLLERERESVLRREQEVAEERRN 567
                                                                                                                                                                                                                 RLOKSOSSDLLERERESVLRREQEVAEERRN
                                                                                  CS198 derived
                                                                                                                                                                                                                                                             4.6%;
llarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                            ₽
K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2003US-00646873.
                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97US-00828855.
98US-00050516.
                                                                                                                                                      protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          50
                                                                                  peptide #4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Colpitts TL, Fried
Hodges SC, Klass
JC, Stroupe SD;
                                                                                                                                                       33
                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                           Score 31; DB 8;
Pred. No. 4e-23;
                                                                                                                                                                                                                                                              Pred. No. 4e; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                       English
                                                                                                                                                        ⋛
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Friedman
Klass MR,
                                                                                                                                                                                                                   <u>ب</u>
                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                     Length 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PN, Gordon
Kratochvil
                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  å 'n
                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      γ̈́
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and
                                                                                                                                                                                                                                                                0;
```

```
RESULT 29
AAE07323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
     PARKER X PAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAW79677-W79680 are synthetic CS198 derived peptide fragments which are used in a method to detect the presence of a target human CS198 polynucleotide in a test sample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be used in detecting, diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oesophagus, gastric ulcer, gastritis, leiomyoma, polyps, Crohn's disease, ulcerative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New gastrointestinal polynucleotides, CS198, and their detection - us for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Billing-Medel
Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                         CS 198; gastrointestinal tract disease; GI tract; gastritis; Crohn's disease; ulcerative colitis; pa Barret's oesophagus; gene therapy; drug screening;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 33 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 26; Page 103; 127pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 1998-542714/46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      31-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9844159-A1
  (BILL/)
(COHE/)
(COLP/)
(FRIE/)
(GORD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     colitis,
                                                                                                                                                                                               30-MAR-1998;
                                                                                                                                                                                                                                                  02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human CS 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAE07323;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAE07323 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (ABBO ) ABBOTT LAB
                                                                                                                                                   31-MAR-1997;
                                                                                                                                                                                                                                                                                                US2001010904-A1
                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         624 VDSAPPGORKKEOWYAGINPSDGINSEVLE 653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4
) BILLINGEL P A.
) COHEN M.
) COLPITTS T L.
) FRIEDMAN P N.
) GORDON J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and pancreatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VDSAPPGORKKEOWYAGINPSDGINSEVLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hayden M, Hod
L, Russell JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97US-00828855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98WO-US006251.
                                                                                                                                                   97US-00828855
                                                                                                                                                                                                    98US-00050516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cohen M, Colpitts TL,
en M, Hodges SC, Klass
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 30;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Stroupe SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                   drug screening;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2;
4.4e-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₹,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Friedman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kratochvil
                                                                                                                                                                                                                                                                                                                                                                                                                          pancreatitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gordon
                                                                                                                                                                                                                                                                                                                                                                                                                                                      gastric ulcer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              used
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CC The CS 198 polynucleotides, polypeptides and antibodies are useful for cdetecting, diagnosing, staging, monitoring, prognosticating, preventing, cc treating or determining predisposition to diseases and conditions of the CG Itract such as cancer, gastric ulcer, gastritis, Crohn's disease, cc ulcerative colitis, pancreatitis and Barret's oesophagus. The CS 198 polypeptides are useful as standards or reagents in diagnostic immunoassays, as components or as target sites for various therapies. CC Antibodies directed against at least one epitope contained within these colypeptides are useful as delivery agents for therapeutic agents, in CC polypeptides are useful as delivery agents for therapeutic agents, in CC polypeptides are not for screening for conditions or diseases associated with CS 198, particularly cancer. Monoclonal antibodies may also be used CC polynucleotide is also useful in gene therapy and drug screening. The CC method of the invention provides an alternative, non-surgical diagnostic method of the invention provides an alternative, non-surgical diagnostic method capable of detecting early stage GI tract disease such as cancer. CC method capable of detecting early stage GI tract disease such as cancer. CC method capable of a peptide derived from human CS 198 polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 30; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to a method of detecting the presence of a target CS 198 polynucleotide comprising contacting the test sample with at least one CS 198-specific polynucleotide. The method is useful for detecting diseases of the gastrointestinal (GI) tract organs, particularly cancer.
                                                                                                    CS198; cancer diagnosis; cancer staging; cancer monitoring; cancer prognosticating; cancer prevention; cancer; gastrointestinal tract disorder; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Billingel PA,
Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, comprises contacting test sample with at least one CS 198-specific polynucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (GRAN/)
(HAYD/)
(HODG/)
(KLAS/)
(KLAS/)
(KRAT/)
(ROBE/)
(RUSS/)
01-MAY-2003
                                   US2003082619-A1
                                                                                                                                                                             Synthetic peptide based on CS198 protein
                                                                                                                                                                                                                   20-NOV-2003
                                                                                                                                                                                                                                                                                      ADA26383 standard; protein; 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           consensus sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 17; Page 52; 68pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-496163/54.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Roberts-Rapp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRO/)
                                                                                                                                                                                                                                                                                                                                                                                                    624 VDSAPPGQRKKEQWYAGINPSDGINSEVLE 653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HODGES S C.
KLASS M R.
KRATCHTL J D.
ROBERTS-RAPP L.
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                             ۵.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HAYDEN M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GRANADOS
                                                                                                                                                                                                                                                                                                                                                                               VDSAPPGORKKEOWYAGINPSDGINSEVLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                 4.4%; Score 30; DB llarity 100.0%; Pred. No. 4.. Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , Cohen M,
Hayden M,
L, Russell
                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Colpitts TL, Friedman Hodges SC, Klass MR, JC, Stroupe SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Friedman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 4; Le
4.4e-22;
                                                                                                                                                                                                                                                                                                                                                                               ω
ω
                                                                                                                                                                               #4
                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kratochvil JD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gordon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
RESULT 31
ADN17176
ID ADN17176
AC ADN17
XX GAST1
XX GAST1
XX Unide
                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                            맑
                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                               The invention describes a method of detecting the presence of a target CS198 polynuclectide in a test sample. The method comprises contacting the test sample with at least one CS198 specific polynuclectide or its complement, and detecting the presence of the target CS198 polynuclectide in the test sample, where the CS198-specific polynuclectide has at least 50% identity to a polynuclectide having any of the 27 fully defined sequences of 34-2894 bp (S1-27) given in the specification, or their fragments or complements. The composition and methods are useful in diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition of an individual to, diseases and conditions of the gastrointestinal tract, e.g. cancer and in gene therapy. This is the amino acid sequence of a synthetic peptide based on the predicted human CS198 protein sequence derived from the CS198 consensus sequence shown in seq id 27.
                                                                    CS198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Detecting the presence of a target CS198 polynucleotide in a test sample comprises contacting the sample with a CS198 specific polynucleotide and detecting the presence of the target CS198 polynucleotide in the test
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Billingel PA,
Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31-MAR-1997;
30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-OCT-2002; 2002US-00278547.
                                                                                                17-JUN-2004
                                                                                                                            ADN17176
                                                                                                                                                     ADN17176 standard; peptide; 33
                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2003-596961/56.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (FRIE/)
(GORD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (COLP/)
                Unidentified
                                          Gastrointestinal tract; GI tract; CS198; cancer; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 17; Page 52; 67pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (KLAS/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (HODG/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (HAYD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (GRAN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ROBE/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KRAT/)
                                                                                                                                                                                                                                                     624 VDSAPPGORKKEOWYAGINPSDGINSEVLE 653
                                                                    peptide
                                                                                                                                                                                                                                                                                 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COLDITIS T L.
COLDITIS T L.
FRIEDMAN P N.
GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
KLASS M R.
KRATOCHVIL J D
                                                                                                                                                                                                                            4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COHEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BILLINGEL P A.
                                                                                                                                                                                                                                                                                                                                         ω
u
                                                                                                                                                                                                                            VDSAPPGORKKEOWYAGINPSDGINSEVLE
                                                                                                                                                                                                                                                                                                                                         A,
                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hayden MA,
L, Russell
                                                                                                (first
                                                                      #4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97US-00828855.
98US-00050516.
                                                                                                                                                                                                                                                                                              4.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Colpitts TL, Friedman
Hodges SC, Klass MR,
JC, Stroupe SD;
                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                Pred. No. 4.4e-22;
                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                           Length 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PN, Gordon
Kratochvil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ñ,
                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                   0
```

```
SOXCCCCCCCCX PROTICE TO THE PROPERTY OF THE PROPERTY OF THE PROTICE TO THE PROPERTY OF THE PRO
Search completed: March Job time: 249.321 secs
                                                                                                            문
                                                                                                                                                              S
                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 30; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Billingel PA, Co
Granados EN, Hay
Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                           Sequence 33 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to reagents and methods for detecting diseases of the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polymucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of diseases or conditions associated with aberrant expression or activity of the CS198 polympetide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 peptide used to illustrate the method of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Diagnosing diseases such as cancer of the gastrointestinal tract, by detecting aberrant expression or activity of the CS198 polypeptide, and associated treatment methods.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GORD/)
(GRAN/)
(HAYD/)
(HODG/)
(KLAS/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (BILL/)
(COHE/)
(COLP/)
(FRIE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31-MAR-1997;
30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22-AUG-2003; 2003US-00646873.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           04-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US2004043406-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 17; SEQ ID NO 46; 67pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2004-313754/29.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (RUSS/)
(STRO/)
                                                                                                                                                                                                                                                                                                                                                                                                   invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (KRAT/)
                                                                                                                                               624 VDSAPPGQRKKEQWYAGINPSDGINSEVLE 653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION OF N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ) KLASS M R.
) KRATOCHVIL J D.
) ROBERTS-RAPP L.
) RUSSELL J C.
) STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
                                                                                                            4 VDSAPPGORKKEOWYAGINPSDGINSEVLE 33
                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              , Cohen M,
Hayden MA,
L, Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97US-00828855.
98US-00050516.
                                                                                                                                                                                                                                                      4.4%; Score 30;
100.0%; Pred. No.
                    3, 2006, 14:24:32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Colpitts TL, Friedman PN, Gordon J; Hodges SC, Klass MR, Kratochvil JD; JC, Stroupe SD;
                                                                                                                                                                                                                               0
                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                         DB 8; Le
                                                                                                                                                                                                                                                                                 Length 33;
                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                               0
```

Coden whom sood en.

```
Regult
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ş
                                                                                                                                                                                                                             hypothetical protein F21856_2 - human
(Appedies: Homo sapiens (man)
(C;Species: Homo sapiens (man)
(C;Species: Homo sapiens (man)
(C;Date: 01-Feb-1999 #sequence_revision 01-Feb-1999 #text_change 09-Jul-2004
(C;Accession: T00636
(C;Accession: T00636
(C;Accession: T00636
(C;Accession: John Coready, P.M.; Skowronski, E.; Adamson, A.W.; Burkhart-Schultz, K.; (R;Accession: J.; Liu, S.; Bruce, R.; Quan, G.; Montgomery, M.; Ow, D.; Nolan, M.;
rgescu, A.; Avila, J.; Liu, S.; Bruce, R.; Quan, G.; Montgomery, M.; Ow, D.; Nolan, M.;
submitted to the EMBL Data Library, January 1998
A;Description: Sequence analysis of a 3.5 Mb contig in 19p13.3 between CDC34 and D19S34:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Title:
Perfect score:
                                                                                                                                         A/Status: preliminary; translated A/Molecule type: DNA A/Residues: 1-679 <LAM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Listing first 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying
                                                                                                                       A;Residues: 1-679 <LAM>
A;Cross-references: UNIPROT:Q8IVT2; UNIPARC:UPI00000745CD; EMBL:AC004030; NID:g2804590;
                                                                                                                                                                                               A; Reference number: Z14195
A; Accession: T00636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ford Bize :
                                                  ;Map position: 19p13.3
;Introns: 594/1; 637/3;
;Note: F21856_2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein -
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                веq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            No. is the number of results predicted by chance to have greater than or equal to the score of the result being pus derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein search, using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gapop 60.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-646-873-42
679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              March
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             283416 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PIR_80:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MDRVTRYPILGIPQAHRGTG...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pir1:*
pir2:*
pir3:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ω
-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         679
                                                                        650/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2006, 14:24:52 ;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GenCore version 5.1.7
(c) 1993 - 2006 Biocceleration Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gapext 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               96216763 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          chosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           T00636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ij
                                                                                                                                                                                from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                summaries
Score 679;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        parameters:
                                                                                                                                                                                GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Search time 39.4944 Seconds (without alignments)
1654.188 Million cell updates/sec
                  DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        . HKNAMAERWESRIYASEEDD
                2
                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           hypothetical
                      679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    printed,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         prote
                                                                                                                                                                                                                                                              ж.,
ж.,
```

경 유

성 암

밁

δ

음 성 음

음 성 음

á

음 성 음 성

```
Matches
                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP 180
                              661
                                                                                                                                          541
                                                                                                                                                                        541
                                                                                                                                                                                                          481
                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                 361
661
                                                                      109
                                                                                      601 VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                                             PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                               REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                             NGHVVPIKPQYKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LEENVYDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                          SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                    KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                     REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                    QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIERBIRLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                KNAMAERWESRIYASEEDD
                                                                                                                                                                                                          KQEASKPPRGCPQAIRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                             PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
KNAMAERWESRIYASEEDD
                                                                      VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                        SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
   679
                                   679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                    480
                                                                           660
                                                                                                           660
                                                                                                                                             600
                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

음 성

**∂** ₽

밁

Search completed: March 3, 2006, 14:30:52 Job time : 39.4944 secs

			•	

```
옻
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table: OLIGO'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Regult
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Post-processing: Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein
                                                                                                                                                                                                                                                                                                     CS021_HUMAN
QBIVT2;
NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].

TISSUB-Brain, and Colon;

MEDLINB-22386257; PubMed-12477932; DOI=10.1073/pnas.242603899;

MEDLINB-22386257; Felngold E.A., Grouse L.H., Derge J.G.,

Strausberg R.L., Felngold E.A., Grouse L.H., Derge J.G.,

Klausner R.D., Collins.F.S., Wagner L., Shenmen C.M., Schuler G.D.,

Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E
                                                                                                                                                                                 Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                        13-SEP-2005 (Rel. 48, Created)
13-SEP-2005 (Rel. 48, Last seq
13-SEP-2005 (Rel. 48, Last ann
                                                                                                                                               NCBI_TaxID=9606;
                                                                                                                                                                                                             Homo sapiens (Human)
                                                                                                                                                                                                                               Name=C19orf21;
                                                                                                                                                                                                                                                Protein Cl9orf21.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed
and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                      HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     eq
eq
                                                                                                                                                                                                                                                                                                                                                                                                                                              679
48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein search, using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of hits satisfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-646-873-42
679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 March
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2166443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gapop-60.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           UniProt_05.80:*
1: uniprot_sprot:*
2: uniprot_trembl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MDRVTRYPILGIPQAHRGTG...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                 . .
- 0
                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ω
`
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            first 500
                                                                                                                                                                                   Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                679
685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2006, 14:19:21 ;
                                                                                                                                                                                                                                                             Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GenCore version (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gapext 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>_</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 705528306 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    chosen
                                                                                                                                                                                                                                                                                                                                                                                                                                             CS021_HUMAN
CS021_PONPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ㅂ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               МB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            summaries
                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                  ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mode1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    parameters:
                                                                                                                                                                                                                                                                                                                          679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Search time 241.523 Seconds (without alignments)
1983.466 Million cell updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5.1.7
Biocceleration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ... HKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N
                                                                                                                                                                                                                                                                                                                                                                                                                                                Q8ivt2 homo sapien
Q5rbh3 pongo pygma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cell updates/sec
```

```
SOTE DE RECOCCOCCOCCE PRE LE RESERVA R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                       밁
                                                                                                                                    á
                                                                                                                                                                      밁
                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
      Ś
                                          밁
                                                                    δ
                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 679; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Coiled coil.
COILED 5
SEQUENCE 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
Schnerch A., Schein J.B., Jones S.J.M., Marra M.A.;
"Generation and initial analysis of more than 15,000 full-length human
and mouse cDNA sequences."; S. 99:1699-16903 (2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This Swiss-Prot entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN the European Bioinformatics Institute. There are no restruse as long as its content is in no way modified and this s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; BC042125; AAH42125.1; -;
EMBL; BC052236; AAH52236.1; -;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ensembl; ENSG00000099812; Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HGNC; HGNC:27000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      T00636;
                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
          541
                                                                         481
                                                                                                         421
                                                                                                                                        421
                                                                                                                                                                        361
                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MDRVTRYPILGIPQAHRGTGLYLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                                                            NGHVVP1KPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                                                                                                                                                                                                            LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                             MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                                                                         ORREADLREQRGLROATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                          KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDSPQQAQVPHVWGWEVAGAPALRLQK
                                                             PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                             PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                          REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                         REEDHEREGLHVGRASTPDWVSEGPOPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                       QEREADLREQRICLE QATOHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                      NGHVVPIKPQVKGVVRBENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                                                                                                                                                                                        LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                     MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        679 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C19orf21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        569 I
75357 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 679;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Potential.
D2881CF5087E61F8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            is not
                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
               600
                                               540
                                                                               540
                                                                                                                                             480
                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                480
                                                                                                                                                                               420
                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
Search completed: March Job time : 243.523 secs
                                                   밁
                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                  Query Match 7.1%; Score 48; DB 1; Length 685; Best Local Similarity 100.0%; Pred. No. 1.5e-40; Matches 48; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                 This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not
                                                                                                                                                                                                                                                                                                NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
TISSUS=Kidney;
The German cDNA consortium;
Submitted (NOV-2004) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                        Pongo pygmaeus (Orangutan).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
                                                 511 FRAPDEPQQAQVPHVWGWEVAGAPALRLQKSQSSDLLERERESVLRRE 558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            575 Potential.
75892 MW; A3A99F4343396E81 CRC64;
        3,
            2006, 14:29:55
                                                                                                     0
                                                                                                   Gaps
                                                                                                      0
```

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring_table: OLIGO Gapop 60.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Listing first 500 summaries
                                                                                                                   RESULT 1
US-09-050-516-42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nord size
                                                                     Sequence 42, Applicat Patent No. 6627414
GENERAL INFORMATION:
                          APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     88
                                                                                                                                                                                                                                                                                                                                                                                                                    Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          is derived by analysis of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 seq.
                                                                                      42, Application US/09050516
5. 6627414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length: 0 length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-646-873-42
679
                                                                                                                                                                                                                                                                                                                                                                                                                  Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         572060 seqs,
COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3:::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IBSUED PATENTS AA:*

1 (cgn2-6/ptrodata/1/iaa/5_COMB.pep:*

1 (cgn2-6/ptrodata/1/iaa/6_COMB.pep:*

2 (cgn2-6/ptrodata/1/iaa/H_COMB.pep:*

4 (cgn2-6/ptrodata/1/iaa/PCTUS_COMB.pep:*

5 (cgn2-6/ptrodata/1/iaa/PCTUS_COMB.pep:*

6 (cgn2-6/ptrodata/1/iaa/backfiles1.pep:*
                                                                                                                                                                                                                                                                                                                                                                       0.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MDRVTRYPILGIPQAHRGTG....
                                                           BILLING-MEDEL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3, 2006, 14:30:17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gapext 60.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            82675679 residues
                                                                                                                                                                                                                                                                US-09-050-516-42
US-10-278-547-42
US-09-050-516-47
US-10-278-547-47
US-09-050-516-43
US-09-050-516-43
US-09-050-516-44
US-09-050-516-44
                                                           PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                    Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                             ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              total
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Search time 50.1275 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (without alignments)
1119.880 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HKNAMAERWESRIYASEEDD 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12
                                                                                                                                                                                                                                                                                                           Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                           Sequence
Sequence
                                                                                                                                                                                                                                                                   Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                    Description
                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                        Sequence
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: 11;
MOLECULE TYPE:
US-09-050-516-42
                                                            S
                                                                                             밁
                                                                                                                         Ś
                                                                                                                                                          밁
                                                                                                                                                                                       S
                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                  S
                                밁
                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/828,8:
APPLICATION NUMBER: 31-MAR-1997
ATTORNEY, AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 606:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 679 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/09/050,516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: 847/938-2623
                                  241
                                                                                                                         181 LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                             121
                                                                                                                                                                                       121 MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
   301
                                                      241 NGHVVPIKPQVKGVVRBENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                               181
                                                                                                                                                                                                                                                                                                                                                    679;
                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                       61
QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                        VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                          VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                        MDRYTRYPILGIPQAHRGTGLYLDGDTSYTYHLYCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                      MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                  NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                           MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                               Leenvydreqidflaarqoflsleqankgaphsspargtpagttpgasqapkafnkphla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GRANADOS,
                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HODGES, STEVEN C.
KLASS, MICHAEL R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                No. 6627414e
                                                                                                                                                                                                                                                                                                                                                                                                                                                             single
                                                                                                                                                                                                                                                                                                                                                                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REAGENTS AND METHODS US
FOR DETECTING DISEASES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EDWARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08/828,855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               42:
                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6065 .US
                                                                                                                                                                                                                                                                                                                                                    Score 679; D
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .
E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USEFUL
                                                                                                                                                                                                                                                                                                                                                                                   DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                  Length 679;
                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                    300
                                                                                                     240
                                     300
                                                                                                                                   240
                                                                                                                                                                180
                                                                                                                                                                                               180
                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                        60
```

```
RESULT 2
US-10-278-547-42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 42, Application Patent No. 6660834
GENERAL INFORMATION:
APPLICANT: BILLING
                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version 2.4
CURRENT APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION NUMBER: US/09/050,516
APPLICATION NUMBER: US/09/050,516
APPLICATION NUMBER: US/09/050,516
FILING DATE: 31-MAR-1997
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KNAMAERWESRIYASEEDD 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPDAYOPYLSPGTPOLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
                                                                                                                                                                                                                                                                                                                                                   STREET: 100 Abbott Park Road
CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                           HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
                                                                                                                                                                                                                                                                                                       60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BILLING-MEDEL, PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GRANADOS, EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COHEN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MAURICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/10278547
                                                                                                                                                                                                                                                                                                                                                                                                                                  TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                   FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     679
                  6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS: Single
; TOPOLOGY: linear
; MOLECULE TYPE: No. 6660834e
; SEQUENCE DESCRIPTION: SEQ ID NO:
US-10-278-547-42
                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                               RESULT 3
US-09-050-516-47
                                                                                                                                                                    ঠ
                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                               맑
                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
Sequence 47, Application US/09050516
Patent No. 6627414
GENERAL INFORMATION:
APPLICANT: BILLING-MEDEL, PATRIC:
APPLICANT: COHEN, MAURICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: 847/935-1729
TELEFAX: 847/938-2623
TELEX: CURknown>
INFORMATION FOR SEQ ID NO: 42:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                           661
                                                                                                                                                                                                          601
                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                            VSESPFFSPIHLHSNVAMTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                         SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSGASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VORQGVSYSVHAYTGOPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                   KNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                        KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                                   PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                        PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: amino acid
                                                                                                                                               KNAMAERWESRIYASEEDD
                                                                                                                                                                                                          VSESPFFSPIHLHSNVAWTVEDPVDSAPPGORKKEOWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                         SOSSDILERERESVIRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                    KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDBPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QEREADLREQRETRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 679; Dilarity 100.0%; Pred. No. 0; Conservative 0; Mismatches
                   PATRICIA
                                                                                                                                                                           679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               42:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                           660
                                                                                                                                                                                                                                                                                                        600
                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                     480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                            660
                                                                                                                                                                                                                                                                          600
```

```
S
                                                                                                                                                             ঠ
                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                 ঠ
                                                                밁
                                                                                                                               유
밁
                          र्
                                                                                                                                                                                                                                                                                                                                      US-09-050-516-47
                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 215 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Bocker, Chery.

NAME: Bocker, Chery.

REGISTRATION NUMBER: 35,441

REFERENCE/DOCKET NUMBER: 6065.US.P1

TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION INFORMATION:

TOT.RPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/8:
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS: sin
TOPOLOGY: linear
MOLECULE TYPE: No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                    Local Similarity
nes 215; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/09/050,516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                525 VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 584
181
                                                                121
                                                                                                 585
                                                                                                                                                                                                                                  465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                             645
                                                                                                                                  51
                                                                                                                                                                                                 ,_
                                                                                                                                                                                                                                                                                                                                                                                                      amino acid
                                                                                                 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 644
                                                                                                                                                                                                   MS PRHLSESSGKPLSTKQEASKP PRGCPQANRGVVRWEY FRLR PLR FRA PDEPQQAQVPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IL
                    DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679
                                                                  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
 DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
                                                                                                                                  VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
VENTION: REAGENTS AND METHODS USEFUL
VENTION: POR DETECTING DISEASES OF THE GASTROINTESTINAL
VENTION: TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                  31.7%; So ilarity 100.0%; F Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FRIEDMAN, PAULA N. GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COLPITTS, TRACEY L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GRANADOS, EDWARD N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IBM Compatible
                                                                                                                                                                                                                                                                                                                                                       No. 6627414e
                                                                                                                                                                                                                                                                                                                                                                                     single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08/828,855
                                                                                                                                                                                                                                                                                     Score 215;
; Pred. No.
                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                 2e-204;
                                                                                                                                                                                                                                                                                                        DB 2;
                                                                                                                                                                                                                                                                       <u>.</u>
                                                                                                                                                                                                                                                                                                   Length 215;
                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                       Gaps
                                                                    180
                                                                                                                                      120
                                                                                                                                                                                                     60
                                                                                                                                                                                                                                      524
```

RESULT 4

```
US-10-278-547-47
                               á
                                                                      밁
                                                                                                     5
                                                                                                                                                밁
                                                                                                                                                                                  ફ
문
                                                                                                                                                                                                                                                                                                   US-10-278-547-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 47, Application patent No. 6660834
GENERAL INFORMATION:
                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 215; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                           TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
LENGTH: 215 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION UNMBER: US/09/050,516
FILING DATE: <Unknown>
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FBSETSEQ FOR WINDOWS Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HODGES, STEVEN C.

KLASS, MICHAEL R.

KRATCCHVIL, JON METHODS USEFUL

TITLE OF INVENTION: REAGENTS AND METHODS USEFUL

FOR DEFECTING DISEASES OF THE GASTROINTESTINAL

TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,4
REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: NO. 6660834e
SEQUENCE DESCRIPTION: SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                             525 VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
                                                                                                                                                                            465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
 121
                                                                        61
                                                                                                                                                \vdash
NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
                             NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
                                                                        VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
                                                                                                                                                MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                               TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/10278547
                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE: 847/935-1729
                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BILLING-MEDEL, PATRICIA COHEN, MAURICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GRANADOS, EDWARD N.
                                                                                                                                                                                                                       100.08; 2
                                                                                                                                                                                                                                                                                                                                                            inear
                                                                                                                                                                                                                         31.7%; Score 215; DB 2;
100.0%; Pred. No. 2e-204;
tive 0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MARK
                                                                                                                                                                                                                                                                                                                                                                           single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         35,441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6065.US.P1
                                                                                                                                                                                                                                                                                                                        47:
                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                              Length 215
                                                                                                                                                                                                                             0
                                                                                                                                                                                                                              Gaps
                                         644
                                                                                                                 584
                                                                                                                                                      60
                                                                                                                                                                                           524
                                                                              120
     180
                                                                                                                                                                                                                                0
```

음 성

DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679

215

```
밁
                            Ś
                                                                                                                         ; TOPOLOGY: li
; MOLECULE TYPE:
US-09-050-516-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 5
US-09-050-516-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 4
Patent No.
                                                                            Query Match
Best Local 9
                                                            Matches
                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/828,85
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:

NAME: Becker, Cheryl L.

REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065
TELECOMMUNICATION INFORMATION:

TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: ROBERTS-RAPP, LISA
APPLICANT: RUSSELL, JOHN C.
APPLICANT: STROUPE, STEPHEN D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
TITLE OF INVENTION: FOR DETECTING DISEASES OF TH
TITLE OF INVENTION: TRACT
THE OF INVENTION: TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Abbott Laboratories STREET: 100 Abbott Park Road CITY: Abbott Park
                                                                           Local
                                                                                                                                                                                       TYPE: amino acids
                                                                                                                                                                       STRANDEDNESS:
                                                                                                                                                                                                                                                                       TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   43,
                     465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 500
                                                            36;
                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ), Application US/09050516
6627414
MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                          5.3%; Score 36; llarity 100.0%; Pred. No. Conservative 0; Mismatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COLPITTS, TRACEY L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BILLING-MEDEL, PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FRIEDMAN, PAULA N.
                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HAYDEN, MARK
                                                                                                                                          No. 6627414e
                                                                                                                                                                       single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FOR DETECTING DISEASES OF THE GASTROINTESTINAL TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                     08/828,855
                                                                                                                                                                                                                                         43:
                                                                                                                                                                                                                                                                                                                        6065.US.P1
                                                            Mismatches
                                                          6.8e-28;
hes 0;
                                                                                          DB 2;
                                                                                        Length 36;
                                                            0
                                                            Gaps
                                                            0,
```

RESULT 6

US-09-050-516-45

Sequence 45, Application US/09050516 Patent No. 6627414

GENERAL INFORMATION:

APPLICANT:

BILLING-MEDEL, PATRICIA COHEN, MAURICE

```
片
                                                                                            S
RESULT 7
                                                                                                                                                                                                                       US-10-278-547-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-278-547-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 43, Application US/10278547
Patent No. 6660834
GENERAL INFORMATION:
APPLICANT: BILLING-MEDEL, PATI
                                                                                                                                        Matches
                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                     TELEX: CURKNOWN>
INFORMATION FOR SEQ ID NO: 43:
SEQUENCE CHARACTERISTICS:
LENGTH: 36 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/09/050,516
FILING DATE: «Unknown»
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6665.US.P1
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASS.FFICATION: «Unknown»
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                        TOPOLOGY: linear MOLECULE TYPE: No. 6660834e SEQUENCE DESCRIPTION: SEQ ID NO: 43:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KLASS, MICHAEL R.
KRATOCHVII, JON D.
KRATOCHVII, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 49
                                                                                                465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 500
                                                                                                                                        36,
                                                        1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Abbott Park
STATE: IL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP: 60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: USA
                                                                                                                                                                                                                                                                                                     STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: 847/938-2623
                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HAYDEN, MARK
HODGES, STEVEN C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COHEN,
                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MAURICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EDWARD N.
                                                                                                                                        0
                                                                                                                                     Score 36; DB 2; L
Pred. No. 6.8e-28;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6065.US.P1
                                                                                                                                                                             Length 36;
                                                                                                                                        <u>..</u>
                                                                                                                                        Gaps
                                                                                                                                        0
```

```
RESULT 8
US-10-278-547-45
                                                                                                                                                                                                                                                                                                                              JS-09-050-516-45
                                                                                         Sequence 45, Application Patent No. 6660834
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                         NFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: STROUPE,
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: USA
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: No. 6627414e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 08/8 FILING DATE: 31-MAR-1997 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEPAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOPTWARE: FastSEQ for Windows Version 2.0 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET:
                                                                                                                                                                                                                                                                Local Similarity
mes 35; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                          TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                 568 ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS 602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100 Abbott Park Road
Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KLASS, MICHAEL R. KRATOCHVIL, JON D. ROBERTS-DAGE
                                                                                                                        Application US/10278547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
STROUPE, STEPHEN D.
VENTION: REAGENTS AND METHODS USEFUL
VENTION: FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FRIEDMAN, PAULA N.
GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COLPITTS, TRACEY L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RANADOS, EDWARD N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Abbott Laboratories
         COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
                                                          BILLING-MEDEL, PATRICIA COHEN, MAURICE
GRANADOS, EDWARD N.
                                                                                                                                                                                                                                                                             5.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   08/828,855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 us/09/050,516
                                                                                                                                                                                                                                                                                                                                                                                                                                           45:
                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                Score 35;
; Pred. No.
                                                                                                                                                                                                                                                                Mismatches 0;
                                                                                                                                                                                                                                                                                DB 2; Le
                                                                                                                                                                                                                                                                                               Length 35;
                                                                                                                                                                                                                                                                   0:
                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                    片
                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-278-547-45
                                                                                                                                                                                                                                       US-09-050-516-44
                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches, 35; Conserv
                                                                                                                                                                                                          Patent No.
                                                                                                                                                                                                                       Sequence 44,
                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                            APPLICANT:
                                                                                                              APPLICANT:
                                   APPLICANT
                                                    APPLICANT
                                                                 APPLICANT
                                                                               APPLICANT
                                                                                                APPLICANT
```

```
TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 45:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KLASS, MICHAEL R.
KRATOCHVII, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear MOLECULE TYPE: No. 6660834e SEQUENCE DESCRIPTION: SEQ ID NO: 45:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
PILING DATE: «Unknown»
APPLICATION NUMBER: 08/828,855
PILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              568 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 602
                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ALFPEVESPTPDENSDONSRSSSOASGITGSYSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 35 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: FastSEQ for Windows Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: Abbott Laboratories
HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUDE, STEPHEN D.
INVENTION: REAGENTS AND METHODS USEFUL
                                                                                                                                                                                                                                                                                                                                   Application US/09050516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                    GRANADOS, EDWARD N.
                                                                                                                                                                                                         COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                    BILLING-MEDEL, PATRICIA COHEN, MAURICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5.2%; Score 35;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6.5e-27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
```

0,

FOR DETECTING DISEASES OF THE GASTROINTESTINAL

```
RESULT 10
US-10-278-547-44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JS-09-050-516-44
                                                                                                                                                                                                                                                                                                                                                 Sequence 44, Application Patent No. 6660834
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 31 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: Fast-SEQ for Windows Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM: MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Match
Local Similarity 100.0%; Pred. No. ...
Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 100 Abbott
CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/09/050,516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                     KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 537 RLQKSQSSDLLERERESVLRREQEVAEERRN 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RLQKSQSSDLLERERESVLRREQEVAEERRN 31
              CITY: Abbott Park
STATE: IL
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                      Application US/10278547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                 HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
                                                                                                                                                                                                                                                                                                              BILLING-MEDEL, PATRICIA
COHEN, MAURICE
                                                                                                                                                                                                                                                                              FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No. 6627414e
                                                                                                                                                                                                                                                GRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4.6%;
                                                                                                                                                                                                                                                                 JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08/828,855
                                                                                                                                                                                                                                               EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 31; DB 2; L;
; Pred. No. 5.3e-23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 11
```

밁 S

```
US-09-050-516-46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-278-547-44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                       APPLICANT: STROUPE,
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 44:
COUNTRY: USA
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                              CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                            APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                        APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: Becker (Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEPAX: 847/938-2623
                                                                                            STREET: 100 Abbott
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTMARE: FASTEM: DOS
SOFTMARE: FASTESO for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: linear
MOLECULE TYPE: No. 6660834e
SEQUENCE DESCRIPTION: SEQ ID NO: 44:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             537 RLQKSQSSDLLERERESVLRREQEVAEERRN 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RLOKSOSSDLLERERESVLRREQEVALERRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 31 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 08/828,855 FILING DATE: 31-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/09050516
                                                                                                                                                                                                        KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
VENTION: REAGENTS AND METHODS USEFUL
VENTION: FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                          COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                    COHEN, MAURICE
                                                                                                                                                                                                                                                                                                                                        HODGES,
                                                                                                                                                                                                                                                                                                                                                                               GRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BILLING-MEDEL, PATRICIA
                                                                                                                                                                                                                                                                                                                     MICHAEL R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Preu....
100.0%; Preu....
                                                                                                                                                                                                                                                                                                                                                           MARK
                                                                                                                                                                                         TRACT
                                                                                                                                                                        49
                                                                                                                                                                                                                                                                                                                                                                             EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 31; DB 2; Length 31; Pred. No. 5.3e-23; Indels 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
```

OPERATING SYSTEM: DOS SOFTWARE: FASTSEQ for Windows Version 2.0 CURRENT APPLICATION DATA:

OPERATING SYSTEM: SOFTWARE: FASCSE(

COMPUTER:

APPLICATION NUMBER:

US/09/050,516

CLASSIFICATION:

```
ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 12
US-10-278-547-46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matchee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patent No. 6660834
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 46,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/828,85:

PILING DATE: 31-MAR-1997

ATTORNEY/AGENT INFORMATION:

NAME: Becker, Cheryl L.

REGISTRATION NUMBER: 35,441

REGISTRATION NUMBER: 35,441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 33 amino acide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: No. 6627414e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
TOPOLOGY: 11:
                                                                                                                                                                                                                                                                                                                                             HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                CLASSIFICATION: <a href="Color: blue;">COMPUTER: IBM Compatible</a>
OPERATING SYSTEM: DOS
SOPTMARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <unknown>
                                                                                                                                                                       ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   624 VDSAPPGORKKEOWYAGINPSDGINSEVLE 653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
                                                                                                                                                                                                                                                                                      ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                COUNTRY: USA
                                                                                                                                                                                                                                                      STATE: IL
                                                                                                                                                                                                                                                                      CITY: Abbott Park
APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/10278547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BILLING-MEDEL, PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COHEN, MAURICE COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RANADOS, EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.4%; Score 30; DB 2; L
100.0%; Pred. No. 5.5e-22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08/828,855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               46:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             °,
```

```
밁
                                                                 Matches
                                                                                                    Query Match
                                                                                                                                                                                                                                                           TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 46:
SEQUENCE CHARACTERISTICS:
                                                                 Local Similarity hes 30; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: <Unknown>
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION: TELEPHONE: 847/935-1729
                                                                                                                                                       TOPOLOGY: linear MOLECULE TYPE: No. 6660834e SEQUENCE DESCRIPTION: SEQ ID NO: 46:
                           624 VDSAPPGQRKKEQWYAGINPSDGINSEVLE 653
VDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
                                                                                                                                                                                                                              TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                       NAME: Becker, Cheryl L. REGISTRATION NUMBER: 35,441
                                                                                                                                                                                                            STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                   TELEPHONE: 847/935-17
TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER:
                                                                   ilarity 100.0%; I Conservative 0;
                                                                     4.4%; Score 30; DB
100.0%; Pred. No. 5.:
ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                          6065.US.P1
                                                                                         DB 2;
                                                                                                       Length 33;
                                                                        Indels
                                                                        0
```

0

Search completed: March 3, Job time: 50.1275 secs 2006, 14:32:04 Colosof Manda Sood sing

š

GenCore version 5.1.7 Copyright (c) 1993 - 2006 Biocceleration Ltd

US-09-050-516-42

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scoring table; OLIGO Gapop 60.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Listing first 500 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Total number of hits satisfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                    Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   •
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              eq
eq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-646-873-42
679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 March
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MDRVTRYPILGIPQAHRGTG.....HKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                  Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Published Applications AA Main:*

1: /cgn2 6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*

2: /cgn2 6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*

3: /cgn2 6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*

4: /cgn2 6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*

5: /cgn2 6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*

6: /cgn2 6/ptodata/1/pubpaa/US11_PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1867569 seqs, 417829326 residues
                                                                                                                                                                                                                                                                              100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
                                                                                                                                                                                                                                                                                                                                 Length

    2006, 14:45:41; Search time 186.079 Seconds
(without alignments)
    1524.651 Million cell updat

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gapext 60
                                                                                                                                                                                                                                                                                                                                    멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chosen parameters:
                                                                                                                                                      US-10-646-873-47
US-10-106-698-4761
US-10-029-386-33676
US-10-106-698-5845
                                                                                                                                                                                                                          US-09-050-516-42
US-10-278-547-42
US-10-646-873-42
US-09-050-516-47
US-10-278-547-47
                 US-10-278-547-43

US-10-646-873-43

US-10-650-5.16-45

US-10-278-547-45

US-10-646-873-45

US-10-516-44
                                                                                                                                          US-09-050-516-43
                                                                                                                                                                                                                                                                                                                                                                                      SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cell updates/sec
                                                                                                                                                                                                                                                                                                                                    Description
                                                                                                                                                        Sequence
Sequence
                                                                                                                                                                                                                            Sequence
Sequence
                                                                                                                                                                                                                                                              Sequence
Sequence
                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                  Sequence
     Sequence
                                                       Sequence
                                                                                                                        Sequence
                                                                                                                                                                                            Sequence
47, Appl
47, Appl
47, Appl
47, Appl
4761, Ap
4761, Ap
5845, Appl
43, Appl
43, Appl
43, Appl
45, Appl
45, Appl
45, Appl
45, Appl
46, Appl
47, Appl
48, Appl
49, Appl
41, Appl
41, Appl
42, Appl
43, Appl
44, Appl
44, Appl
```

ALIGNMENTS

```
문
                                                                                   S
                                                                                                                      밁
                                                                                                                                                   S
밁
                          S
                                                                                                                                                                                                                                              ; TOPOLOGY: linear; MOLECULE TYPE: No. US20010010904Ale
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 42, Applicat Patent No. US20010010 GENERAL INFORMATION:
                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                               TELEX:
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: RUSSELL, APPLICANT: STROUBE, APPLICANT: STROUBE, TITLE OF INVENTION: ITITLE OF INVENTION: TITLE OF INVENTION: UNMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl ".
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: USA
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: Abbott Laboratories STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                 STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                LENGTH:
121
                                                         61 VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                        61
                                                                                                                                           1 MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGFEASGWGQDEPQTWFTDHRAQQG
                                                                                                                       1 MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US20010010904A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Abbott Park
                   MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP 180
                                                                             VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/09050516
                                                                                                                                                                                                                                                                                                                                                                                              847/938-2623
                                                                                                                                                                                                                                                                                                                              679 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COLPITTS, TRACEY L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BILLING-MEDEL,
COHEN, MAURICE
                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IBM Compatible
                                                                                                                                                                                                                                                                                                 single
                                                                                                                                                                                    100.0%; Score 679; I
100.0%; Pred. No. 0;
/ative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF THE GASTROINTESTINAL TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08/828,855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                6065.US
                                                                                                                                                                                                                                                                                                                                                                                                                                                . P1
                                                                                                                                                                                                                       B
                                                                                                                                                                                                                     υ
•
                                                                                                                                                                                        0
                                                                                                                                                                                                                       Length 679;
                                                                                                                                                                                        Indels
                                                                                                                                                                                        0,
                                                                                                                                                                                        Gaps
                                                                                             120
                                                                                                                            60
                                                                                                                                                            60
                                                                 120
                                                                                                                                                                                         0
```

```
RESULT 2
US-10-278-547-42
US-10-278-547-42
; Sequence 42, Application
; Publication No. US200300
; Publication INFORMATION:
          COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.
CURRENT APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
STATE: IL
                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: BILLING-MEDEL, PATR
COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                 TITLE
PRIOR
                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        V$E$PFF$PIHLH$NVAWTVEDPVD$APPGQRKKEQWYAGINP$DGIN$EVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                    COUNTRY: USA
ZIP: 60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PPDAYOPYLSPGTPOLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                 얶
APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/10278547
                                                                                                                                                                                                                                                                                                                             HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US20030082619A1
                                                                                                                                                                                                                                                                                                                                                                                                                  GRANADOS, EDV
HAYDEN, MARK
                                                                                                                                                                                                                                                                                                              TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                      EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PATRICIA
                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                         S
                                                               밁
                                                                                                 S
                                                                                                                                      밁
                                                                                                                                                               S
                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                 밝
                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-278-547-42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 679; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 42:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/09/050,516
FILING DATE: «Unknown»
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
TELEPHONE: 847/935-1729
TELEPHONE: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear
MOLECULE TYPE: No. US20030082619A1e
SEQUENCE DESCRIPTION: SEQ ID NO: 42:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
                                                                                                                                      541
                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
 661
                                661
                                                                    601
                                                                                                     601
                                                                                                                                                                        541
                                                                                                                                                                                                           481
                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPBASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                                                                                                                                                                        QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                     KNAMAERWESRIYASEEDD
                                                                                        VSESPFFSPIHLHSNVAMTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                           SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                  KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                                  PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                   REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LEENVVDREQIDFLAARQOFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: amino acid
STRANDEDNESS: single
                                                                   VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                       SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                 REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                      QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
 KNAMAERWESRIYASEEDD
                                                                                                                                                                                                           KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                              PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 679 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 679; 100.0%; Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                679
 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              몂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .
P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                    660
                                                                                                                                         600
                                                                                                                                                                                                                                                                               480
```

δ 밁 S 8 S 밁 δ 밁 δ 문 S 밁 á В δ 밁 S

```
US-10-646-873-42

; Sequence 42, Application US/10646873

; Publication No. US20040043406A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY: linear MOLECULE TYPE: NO. US20040043406Ale SEQUENCE DESCRIPTION: SEQ ID NO: 42: US-10-646-873-42
S
                                                                            밁
                                                                                                                                                ঠ
                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                 ई
                                                                                                                                                                                                                                                                                                                                                                                      Matches 679;
                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 42:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/09/050,516
FILING DATE: 30-MAR-1998
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: BILLING-MEDEL, PATRICIA
121 MKTYRLDAGDADPRRLCDLERERWAVIQGQAVRKSSTVATLQGTPDHGDPRTPGPPRSTP 180
                                                                            61
                                                                                                                                                    13
                                                                                                                                                                                                                                                                             1 MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                    VQRQGVSYSVHAYTGQPSPRGLHSENREDEGWQVYRLGARDAHQGRPTWALRPEDGEDKE 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/10/646,873 FILING DATE: 22-Aug-2003 CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ဝှု
                                                                                                                                                                                                                                     MDRVTRYPILGIPQAHRGTGLVLDGDTSYTYHLVCMGPEASGWGQDEPQTWPTDHRAQQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 679 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Becker, Cheryl L. REGISTRATION NUMBER: 35,441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OPERATING SYSTEM: DOS
SOPTWARE: FastSEQ for Windows Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
ilarity 100.0%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HODGES, STEVEN C.

KLASS, MICHAEL R.

KRATOCHVIL, JON D.

KRATOCHV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COHEN, MAURICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                          Score 679;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB
                                                                                                                                                                                                                                                                                                                                                                                      .0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 679;
                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                    120
                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 4
US-09-050-516-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 47, Application US/09050516 Patent No. US20010010904A1
                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION APPLICANT: BILLIN APPLICANT: COHEN
                                                                                                                                                                                                                                                                                  APPLICANT:
APPLICANT:
             ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
                                                                                                                                                                                       TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                        NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                      APPLICANT
                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
OPERATING SYSTEM:
                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 LEENVYDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NGHVVPIKPQVKGVVREENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIEREIRLA 300
                                                                                                         Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QEREADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSGASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REEDHRREGLHVGRASTPDWVSEGPQPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REEDHRREGLHVGRASTPDWVSEGPOPGLRRALSSDSILSPAPDARAADPAPEVRKVNRI 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NGHVVPIKPQVKGVVRBENKVRAVPTWASVQVVDDPGSLASVESPGTPKETPIERBIRLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LEENVVDREQIDFLAARQQFLSLEQANKGAPHSSPARGTPAGTTPGASQAPKAFNKPHLA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KNAMAERWESRIYASEEDD 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SQSSDLLERERESVLRREQEVALERRINAL FPEVFSPTFDENSDQNSRSSSQASGITGSYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PPDAYQPYLSPGTPQLEFSAFGAFGKPSSLSTAEAKAATSPKATMSPRHLSESSGKPLST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QEREADLREQRGIRQATDHQELVEIPTRPLLTKLSLITAPRRERGRPSLYVQRDIVQETQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQK
                                                                                                                                                                                                                                                                                 HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
                                                                                                                                                                                                                                                                                                                                                 COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN GRANADOS, EDWARD N.
                                                                               USA
                                                                                                                                                                                                                                 ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
                                                                                                                                                                                                                                                                                                                                                                                                                BILLING-MEDEL,
COHEN, MAURICE
                                                                                                                                                                                                        REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                  PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480
```

```
RESULT 5
US-10-278-547-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              , MOLECULE TYPE: No. US20010010904A1e US-09-050-516-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: 47
SEQUENCE CHARACTERISTICS:
LENGTH: 215 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 47, Application US/10278547
Publication No. US20030082619A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 215; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/8:
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: FASTSEQ for Windows Version 2.0 CURENT APPLICATION DATA: APPLICATION NUMBER: US/09/050,516 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: 847/938-2623
                                                                                                                            NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ZIP: 60064-3500
COMPUTER READABLE FORM:
                                                                                                                                                                                                       TITLE OF
                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: BILLING-MEDEL, PATRICIA COHEN, MAURICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      585 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                525 VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Becker, Cheryl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                                                   ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
STATE: IL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                    COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31.7%; Score 215; DB 3; Liarity 100.0%; Pred. No. 9.8e-194; Conservative 0; Mismatches 0;
                                                                                                                                                                    HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
INVENTION: FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                               GRANADOS, EDWARD N.
                                                                                                                                                                                                                                                                                                                GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08/828,855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                       US-10-646-873-47
                                                                                                                                                                                                                                                                                             Sequence 47, Application US/10646873
Publication No. US20040043406A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 601
TELECONMUNICATION IMPORMATION:
TELEPHONE: 847/935-1729
TELEFAX: 847/938-2623
 NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                         BILLING-MEDEL, PATRICIA COHEN, MAURICE
                                                                                                                                                                                                   COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
                                                                                                                                                                                        GRANADOS,
                                                                                                                                                                                    EDWARD N.
```

```
STRANDEDNESS: SINGLE
TOPOLOGY: linear
MOLECULE TYPE: NO. US20030082619Ale
SEQUENCE DESCRIPTION: SEQ ID NO: 47:
US-10-278-547-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: PRStSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION ODTA:
APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: CURKNOWN>
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
FILING DATE: 31-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            585 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               525 VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                      DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679
                                                                                                                                                                                                                                                                                                                                                                                                                             DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
ENCREPTION DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 215; DB 4; Lo
Pred. No. 9.8e-194;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
SEQUENCE DESCRIPTION: SEQ ID NO: 47: US-10-646-873-47
                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                             US-10-106-698-4761
                                                                                                                                                                                                                                                                                   RESULT 7
                                                                                                                                                                                                Sequence 4761, Application US/10106698 Publication No. US20030109690A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 215; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                       CURRENT APPLICATION NUMBER: US/10/106,698
CURRENT FILING DATE: 2002-03-27
CURRENT REPLICATION NUMBER: PCT/US00/26524
PRIOR FILING DATE: 2000-09-28
                                                                                                                                   APPLICANT: Ruben et al.
TITLE OF INVENTION: Colon and Colon Cancer
FILE REFERENCE: PA005P1
                   PRIOR APPLICATION NUMBER: US 60/157,137 PRIOR FILING DATE: 1999-09-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO: 47:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/646,873
FILING DATE: 22-Aug-2003
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                    645
                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                              585 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                525 VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -
                                                                                                                                                                                                                                                                                                                                                                                                                            NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 215 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/09/050,516 FILING DATE: 30-MAR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: FastSEQ for Windows Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OPERATING SYSTEM: DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 100 Abbott Park Road CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                       DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVABERRNALFPEVFSPTPDENSDQ 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 08/828,855 FILING DATE: 31-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                              DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
US 60/163,280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 215; DB 4; Li; Pred. No. 9.8e-194;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6065.US.P1
                                                                                                                                                            Associated Polynucleotides and Polypeptide
                                                                                                                                                                                                                                                                                                                                                                                      679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
S
                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-029-386-33676; Sequence 33676, Application US/10029386; Publication No. US20030194704A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-106-698-4761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 1
NUMBER OF SEQ ID NOS
SOFTWARE: PatentIn V
SEQ ID NO 4761
                                                                                                                                                                                                                            US-10-106-698-5845
                                                                                                                                                                                                                                              RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-029-386-33676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                Sequence 5845, Application US/10106698 Publication No. US20030109690A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 33676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/10/029,386
CURRENT FILING DATE: 2001-12-20
NUMBER OF SEQ ID NOS: 34288
          TITLE OF INVENTION: Colon and Colon Cancer Associated Polynucleotides and Polypeptide FILE REFERENCE: PA005P1
CURRENT APPLICATION NUMBER: US/10/106,698
CURRENT FILING DATE: 2002-03-27
PRIOR APPLICATION NUMBER: PCT/US00/26524
PRIOR PILING DATE: 2000-09-28
PRIOR APPLICATION NUMBER: US 60/157,137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Penn, Sharron G.
APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: Annomax Sequence Listing Engine vers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: HUMAN GENOME-DERIVED TITLE OF INVENTION: EXPRESSION ANALYSIS
                                                                                                                                              APPLICANT: Ruben et al.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILE REFERENCE: AEOMICA-X-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: Xaa equals any of the naturally occurring beaming according to the naturally occurring beaming accidentations (116)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: MISC_FEATURE LOCATION: (55)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: MAP TO AC004030.1 OTHER INFORMATION: EXPRESSED IN HELA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENGTH: 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
nes 60; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      563 EERRNALFPEVFSPTEDENSDONSRSSSSQASGITGSYSVSESFFFSFIHLHSNVAWTVED
                                                                                                                                                                                                                                                                                                                                            595 ITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQW 637
                                                                                                                                                                                                                                                                                                                                                                                  43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EERRNAL PPEVFSPTPDENSDQNSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVED
                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NOS: 8564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1999-11-03
1999-09-29
                                                                                                                                                                                                                                                                                                                                                                                  6.3%; Score 43; DB
100.0%; Pred. No. 3e.
rative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 60; DB 4; L; Pred. No. 9.9e-48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIGNAL =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR G
                                                                                                                                                                                                                                                                                                                                                                                                      DB 4;
. 3e-32;
                                                                                                                                                                                                                                                                                                                                                                                                                        Length 43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 172
                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                              4
                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          115
                                                                                                                                                                                                                                                                                                                                                                                          0
```

NUMBER: US 60/163,280

```
RESULT 10
US-09-050-516-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 1999-11-03
NUMBER OF SEQ ID NOS: 8564
SOFTWARE: PatentIn Ver. 3.0
SEQ ID NO 5845
LENGTH: 57
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Homo sapiens
US-10-106-698-5845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 5.6%; Score 38; DB 4; Length 57; Best Local Similarity 100.0%; Pred. No. 2e-27; Matches 38; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 43, Application US/09050516 Patent No. US20010010904A1
                                                                                                                                                   CLASSIFICATION:
PRIOR APPLICATION UMBER: 08/828,85
APPLICATION NUMBER: 08/828,85
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/335-1729
                                                                                                    INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
COMPUTER: IBM Compat
OPERATING SYSTEM: DO
                                                                                     SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                              SOPTWARE: FastSEQ for Windows Version 2.0 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/050,516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: REAGES TITLE OF INVENTION: FOR DITTITLE OF INVENTION: TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET:
                                LENGTH: 36 amino acids TYPE: amino acid STRANDEDNESS: single
                                                                                                                                        TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                   FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               305 ADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRR 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 ADLREQRGLRQATDHQELVEIPTRPLLTKLSLITAPRR 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E: Abbott Laboratories
100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COLPITTS,
single
linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FRIEDMAN, PAULA N. GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KRATOCHVIL, JON D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BILLING-MEDEL, PATRICIA COHEN, MAURICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HAYDEN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                     IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                         Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S, STEVEN C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF TI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TRACEY L.
                                                                                                                                                                                                                                                                               08/828,855
                                                                                                                                                                                           6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
;
TOPOLOGY: Inear
;
MOLECULE TYPE: No. US20030082619A1e
; SEQUENCE DESCRIPTION: SEQ ID NO: 43:
US-10-278-547-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; MOLECULE TYPE: No. US20010010904Ale US-09-050-516-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-278-547-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 11
Query Match
Best Local Similarity
Matches 36; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 43, Application US/102 Publication No. US20030082619A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                             TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 43:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/09/050,516
FILING DATE: «Unknown»
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6665.US.P1
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OPERATING SYSTEM: DOS
SOFTWARE: FRANCSEQ for Windows Version
SOFTWARE: FRANCSEQ for Windows Version
APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <UNKnown>
PRIOR APPLICATION DATA:

PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: ADbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: BILLING-MEDEL, PATRICIA COHEN, MAURICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                                          LENGTH: 36 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE: IL
COUNTRY: USA
                                                                                                                                                                                                                                                                                                              TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: Abbott Park
                                                                                                                                                                                                                                                                                          TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/10278547
        5.3%; Score 36; DB 4; ilarity 100.0%; Pred. No. 1e-25; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HODGES, STEVEN C.

KLASS, MICHAEL R.

KRATOCHVIL, JON D.

INVENTION: REAGENTS AND METHODS USEFUL

FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HAYDEN, MARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5.3%; or 100.0%; Pred. No. 100.0%; Pred. No. Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EDWARD N.
                                                                                                                                                                                                                                                                                                                                                      6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 3;
1e-25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                               Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 36,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

Indels

٥.

Gaps

음 성

MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 500

465

```
TOPOLOGY: linear

MOLECULE TYPE: No. US20040043406Ale
SEQUENCE DESCRIPTION: SEQ ID NO: 43:
US-10-646-873-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-646-873-43
밁
                              ई
                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO: 43:
SEQUENCE CHARACTERISTICS:
LENGTH: 36 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 43, Ap
Publication No.
                                                                                Query Match
Best Local Similarity
                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: BILLING-MEDEL, PATRICIA COHEN, MAURICE
                     465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 500
                                                                       36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/10/646,873
FILING DATE: 22-Aug-2003
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/09/050,516 FILING DATE: 30-MAR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 08/828,855 FILING DATE: 31-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                  TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/10646873
Vo. US20040043406A1
                                                                     5.3%; Scilarity 100.0%; F
Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HODGES, STEVEN C.
KLASS, MICHAEL R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EDWARD N.
                                                                                        Score 36; DB 4; Length 36; Pred. No. 1e-25;
                                                                        Mismatches
                                                                 . 1e-25;
0;
                                                                        Indels
                                                                        0;
                                                                        Gaps
                                                                        0
```

US-10-278-547-45; Sequence 45, Applicat: publication No. US200; Publication No. US200; GENERAL INFORMATION

Application US/10278547

US20030082619A1

APPLICANT:

BILLING-MEDEL, PATRICIA

RESULT 14

```
US-09-050-516-45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 13
문
                           ş
                                                                                                                     TOPOLOGY: linear

MOLECULE TYPE: No. US20010010904Ale
US-09-050-516-45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 45, Application US/09050516 Patent No. US20010010904A1
                                                           Matches
                                                                        Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION
                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 35 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott La
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                             TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                             TELEPHONE:
                                                                                                                                                                                                                                                                                                                                          NAME: Becker,
                   568 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 602
                                                           35;
1 ALPPEVFSPTPDENSDONSRSSSOASGITGSYSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60064-3500
                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KLASS, MICHAEL R.
KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STROUPE, STEPHEN D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COHEN, MAURICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BILLING-MEDEL,
                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HAYDEN, MARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Abbott Laboratories
                                                                                                                                                                                                                                                                             847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STEVEN C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      49
                                                                                                                                                                                                                                                                                                                                                                                       08/828,855
                                                                                                                                                                                                                                  45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PATRICIA
                                                           score 35; DB
pred. No. 8.8
0; Mismatches
                                                                                                                                                                                                                                                                                                             6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AND METHODS USEFUL
                                                                             8.8e-25;
                                                                                           DB .3;
                                                              0
                                                                                        Length 35;
                                                              Indels
                                                              <u>.</u>
                                                              Gарв
```

```
RESULT 15
US-10-646-873-45
                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linear;

MOLECULE TYPE: No. US20030082619A1e
SEQUENCE DESCRIPTION: SEQ ID NO: 45:
US-10-278-547-45
                                                                                                                                         Sequence 45, Application US/10646873 Publication No. US20040043406A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 35; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 45:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette

COMPUTER: IBM Compatible

OPERATING SYSTEM: DOS

SOFTWARE: FastSEQ for Windows Version 2.0

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/10/278,547

FILING DATE: 23-Cct-2002

CLASSIFICATION CURKNOWN>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/99/050,516

FILING DATE: <UNKNOWN>

APPLICATION NUMBER: 08/928,855

FILING DATE: 31-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                      APPLICANT: BILLING-MEDEL, PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 49
                                                                                                                                                                                                                                                                                                           568 ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS 602
                                                                                                                                                                                                                                                                                      μ
                                                                                                                                                                                                                                                                                      ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS'35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Becker, Cheryl L. REGISTRATION NUMBER: 35,441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 35 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                               5.2%; Score 35; DB llarity 100.0%; Pred. No. 8.8 Conservative 0; Mismatches
COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
GRANADOS, EDWARD N.
HAYDEN, MARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GORDON, JULIAN GRANADOS, EDWAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COHEN, MAURICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                    DB 4; Le
                                                                                                                                                                                                                                                                                                                                                                                                      Length 35;
                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                 0
```

```
; STRANDEDNESS: Single
; TOPOLOGY: linear
; MOLECULE TYPE: No. US20040043406A1e
; SEQUENCE DESCRIPTION: SEQ ID NO: 45:
US-10-646-873-45
                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                     RESULT 16
US-09-050-516-44
                                                                                                                                                                                                                                                               Sequence 44, Application US/09050516 Patent No. US20010010904A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: BILLIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEX: «Unknown»
INFORMATION FOR SEQ ID NO: 45:
SEQUENCE CHARACTERISTICS:
LENGTH: 35 amino acids
TYPE: amino acid
                 APPLICANT:
                                                                                                                                                 APPLICANT:
                                                                                                                                                                                       APPLICANT:
                                                                          APPLICANT
                                                                                          APPLICANT:
                                                                                                              APPLICANT:
                                                                                                                               APPLICANT
APPLICANT
                                                       APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:

APPLICATION UNMBER: US/09/050,516

FILING DATE: 30-MAR-1998

APPLICATION NUMBER: 08/828,855

FILING DATE: 31-MAR-1997

ATTORNEY/AGENT INFORMATION:

NAME: Becker, Cheryl L.

NAME: Becker, Cheryl L.

REGISTRATION NUMBER: 35,441

REGISTRATION NUMBER: 6065.US.P1

TELEPHONE: 847/935-1729

TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/10/646,873
FILING DATE: 22-Aug-2003
CLASSIFICATION: CUnknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HODGES, STEVEN C.

KLASS, MICHAEL R.

KRATOCHVIL, JON D.

TITLE OF INVENTION: REAGENTS AND METHODS USEFUL

FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                   568 ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS 602
                                                                                                                                                                                                                                                                                                                                                                                  ALFPEVESPTPDENSDQNSRSSSQASGITGSYSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE: IL
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET: 100 Abbott
CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: Abbott Laboratories
                                                   HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
                                                                                                                                             COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
STROUPE, STEPHEN D
           ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
                                                                                                                                                                                                      COHEN, MAURICE
                                                                                                                               GRANADOS,
                                                                                                                                                                                                                            BILLING-MEDEL, PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5.2%; Score 35; DB 4;
100.0%; Pred. No. 8.8e-2
                                                                                                                             EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8.8e-25;
                                                                                                                                                                                                                                                                                                                                                                                  35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
```

```
RESULT 17
US-10-278-547-44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-050-516-44
                                                                                                                                                                                                                                                                                                                        Sequence 44, Application US/10278547 Publication No. US20030082619A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 606
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEPAX: R47/000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/8
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/09/050,516 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: USA
ZIP: 60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS:
TOPOLOGY: lir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Becker, Cheryl
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
                  NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                         TITLE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                          537 RLOKSOSSDLLERERESVLRREQEVAEERRN 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            T: 100 Abbott Park Road
Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                      HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Abbott Laboratories
                                                                                                                                                                                                       COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
GRANADOS, EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            No. US20010010904A1e
                                                                                                                                                                                                                                                                                           BILLING-MEDEL, PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.6%; Score 31; DB 3; L
.00.0%; Pred. No. 4.7e-21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08/828,855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             44:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 18
                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY: USA
OPERATING SYSTEM: DOS
```

밁 S

```
TOPOLOGY: linear;

MOLECULE TYPE: No. US20030082619Ale
SEQUENCE DESCRIPTION: SEQ ID NO: 44:
US-10-278-547-44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-646-873-44
; Sequence 44, Application US/10646873
; Publication No. US20040043406A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 100.0%; P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO: 44:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 08/828,855
PILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6085.US
TELEPHONE: 847/935-1729
TELEPHONE: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: <Unknown>
            ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                               CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                               TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                          NUMBER OF SEQUENCES: 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                537 RLQKSQSSDLLERERESVLRREQEVAEERRN 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 31 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION: <Unknown>
                                                                                                             CITY: Abbott Park
                                                                    COUNTRY:
                                                                                                                                                                                                                                                                     HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
                                                                                                                                                                                                                                                                                                                                                                 COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                BILLING-MEDEL, PATRICIA COHEN, MAURICE
                                                                                                                                                                                                                                                                                                                                                    GRANADOS,
                                                                             USA
IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4.6%; Score 31; DB 4; L
100.0%; Pred. No. 4.7e-21;
                                                                                                                                                                                                                 TRACT
                                                                                                                                                                                                                                                                                                                                                  EDWARD N.
                                                                                                                                                                                                                                                                       JON D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>,</u>
```

CURRENT APPLICATION DATA:

SOFTWARE: FastSEQ for Windows Version 2.0

```
TOPOLOGY: linear
HOLECULE TYPE: NO. US20040043406Ale
SEQUENCE DESCRIPTION: SEQ ID NO: 44:
US-10-646-873-44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-050-516-46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence 46, Application US/09050516
Patent No. US20010010904A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 44:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
              COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: PastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
                                                                                 ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                        TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                     PPLICANT:
                                                                                                                                COUNTRY:
                                                                                                                                                                                      STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       537 RLQKSQSSDLLERERESVLRREQEVAEERRN 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 RLOKSOSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                         Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/09/050,516
FILING DATE: 30-MAR-1998
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/10/646,873 FILING DATE: 22-Aug-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Becker, Cheryl L. REGISTRATION NUMBER: 35,441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION: <Unknown>
                                                                                                                                                         Ľ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ENGTH: 31 amino acids
                                                                                                                                                                                                                                                                                                           KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BILLING-MEDEL, PATRICIA COHEN, MAURICE COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                               HODGES, STEVEN C.
KLASS, MICHAEL R.
                                                                                                                                                                                                                                                                                                                                                                                                                                       GRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                  HAYDEN, MARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                      JULIAN
                                                                                                                                                                                                                                          REAGENTS AND METHODS USEFUL
FOR DETECTING DISBASES OF THE GASTROINTESTINAL
TRACT
49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4.6%; Score 31; DB 4;
100.0%; Pred. No. 4.7e-2:
tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                    EDWARD N.
US/09/050,516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 20
US-10-278-547-46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-050-516-46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 46, Application US/10278547
Publication No. US20030082619A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS LENGTH: 33 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: No. US20010010904A1e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE: 31-MAR-
                                                    COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION NUMBER: US/10/278,547
PILING DATE: 23-Oct-2002
CLASSIFICATION - CURKNOWN>
PRIOR APPLICATION NUMBER: US/09/050,516
APPLICATION NUMBER: US/09/050,516
FILING DATE: CULKNOWN>
PRIOR APPLICATION NUMBER: US/09/050,516
APPLICATION NUMBER: US/09/050,516
FILING DATE: CULKNOWN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS:
TOPOLOGY: lir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDORESSEE: Abbott Laboratories
APPLICATION NUMBER: 08/828,855 FILING DATE: 31-MAR-1997 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: BILLING-MEDEL, PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   624 VDSAPPGORKKEOWYAGINPSDGINSEVLE 653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  H: 33 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Becker,
                                                                                                                                                                                                                                                                                                                                                                STREET: 100 Abbott
CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                        COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                          60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GORDON, JULIAN
GRANADOS, EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COHEN, MAURICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  single
                                                                                                                                                                                                                                                                                                                                                                                     100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08/828,855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 46:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>.</u>.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 30;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 3; L
. 4.3e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
```

TELECOMMUNICATION INFORMATION: TELEPHONE: 847/935-1729

REFERENCE/DOCKET NUMBER: 55,441

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: NO. US20030082619Ale SEQUENCE DESCRIPTION: SEQ ID NO: 46: US-10-278-547-46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 21
US-10-646-873-46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 4.4%; Score 30; DB 4; L
Best Local Similarity 100.0%; Pred. No. 4.3e-20;
Matches 30; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 46, Application US/10646873 Publication No. US20040043406A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 46:
SEQUENCE CHARACTERISTICS:
CURRENT APPLICATION NUMBER: US/10/646,873

PILING DATE: 22-Aug-2003

CLASSIFICATION - (Unknown)

PRIOR APPLICATION - (Unknown)

PRIOR APPLICATION - (Unknown)

PRIOR APPLICATION NUMBER: US/09/050,516

PILING DATE: 30-MAR-1998

APPLICATION NUMBER: 08/828,855

PILING DATE: 31-MAR-1997

ATTORNEY, AGENT INFORMATION:

NAME: Becker, Cheryl L.

REGISTRATION NUMBER: 35,441

REGISTRATION NUMBER: 35,441

REFERENCE/DOCKET NUMBER: 6065.US.P1

TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: USA
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          624 VDSAPPGORKXEQWYAGINPSDGINSEVLE 653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 VDSAPPGORKKEOWYAGINPSDGINSEVLE 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 33 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
GRANADOS, EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BILLING-MEDEL, PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HAYDEN, MARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

<u>,,</u>

Search completed: March 3, 2006, 14:50:28 Job time: 187.079 secs

		•	•	
•				
•				
			•	

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                    Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Word Bize :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scoring-table: OLIGO Gapop 60.0 , Gapext 60.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run on:
Search completed: March 3, 2006, 14:50:59 
Job time: 18.9877 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Listing first 500 summaries
                                                                                                        No matches found
                                                                                                                                                                                                                                                                                                             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                              Query
Score Match Length DB ID
                                                                                                                                                                                                                                                                                                                                                                                                                 Published Applications AA New:*

1: /cgn2 6/ptodata/1/pubpaa/USO8 NEW PUB.pep:*

2: /cgn2 6/ptodata/1/pubpaa/USO8 NEW PUB.pep:*

3: /cgn2 6/ptodata/1/pubpaa/USO7 NEW PUB.pep:*

4: /cgn2 6/ptodata/1/pubpaa/USO7 NEW PUB.pep:*

5: /cgn2 6/ptodata/1/pubpaa/USO7 NEW PUB.pep:*

6: /cgn2 6/ptodata/1/pubpaa/USO1 NEW PUB.pep:*

7: /cgn2 6/ptodata/1/pubpaa/USO1 NEW PUB.pep:*

8: /cgn2 6/ptodata/1/pubpaa/USO1 NEW PUB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       March 3, 2006, 14:46:31; Search time 18.9877 Seconds (without alignments) 715.215 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-646-873-42
679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     135346 seqs, 20000420 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MDRVTRYPILGIPQAHRGTG......HKNAMAERWESRIYASEEDD 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                     SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                         Description
```

Control of the second of the s

```
3
                                                                                                                                                                                                                                                  Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Run
                                                                                                                                                 Database
                                                                                                                                                                                                  Post-processing: Minimum Match 0% Maximum Match 100%
                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                   Searched:
                                                                                                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                      Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein search, using sw model
                                                                                A Geneseq_21:*
1: geneseqp1980
2: geneseqp1990
3: geneseqp2000
4: geneseqp2001
                                                                                                                                                                                                                                                                                                                                                                BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      March
                                                                                                                                                                                                                                                                                                                                                                                                                                        189
                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-646-873-43
                                                                                                                                                                                                                                                                                                                                   2443163 seqs, 439378781 residues
                                                                                                                                                                                   Maximum
Listing
                                                                                                                                                                                                                                                                                                                                                                                                                 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
geneseqp2000s:*
geneseqp2001s:*
geneseqp2002s:*
geneseqp2003as:*
geneseqp2003bs:*
geneseqp2004s:*
                                                                                                                  geneseqp1980s:*
geneseqp1990s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'n
                                                                                                                                                                                     first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2006, 13:19:17; Search time 19.242 Seconds (without alignments) 822.038 Million cell updates/sec
                                                                                                                                                                                                                                                                                                      2443163
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	80	ID	iption
۲ :	189	100.0	36	N	AAW79677	Aaw79677 Synthetic
N	189	100.0	36	4	AAE07320	Aae07320 Human CS
ω	189	8	36	ტ	ADA26380	Ada26380 Synthetic
4	189	٠	36	`. 00	ADN17173	Adn17173 CS198 pep
տ	189	100.0	215	N	AAW79681	Aaw79681 Human CS1
σ	189	•	215	4	AAE07324	Aae07324 Human CS
7	189	•	215	თ	ADA26384	Ada26384 Synthetic
æ	189	٠	215	8	ADN17177	CS198
9	189		672	4	AAM79574	Human
10	189	100.0	679	N	AAW79676	Human
11	189	100.0	6.79	4	AAE07319	Human
12	189	100.0	679	4	AAM78590	
13	189	100.0	679	6	ADA26379	
14	189	100.0	679	7	ADG14341	Human
15	189	100.0	679	8	ADN17172	
16	189	100.0	692	æ	ADX97562	
17	63	33.3	926	υ	ABP43837	DKFZp
18	63	33.3	926	7	ADN95113	
19	58	30.7	162	8	ADX79541	Adx79541 Plant ful
20	58	30.7	453	w	AAB29623	
21	58	30.7	453	ហ	AAE24069	Aae24069 Flea peri
22	58	30.7	1219	4	ABB65388	
23	57	30.2	93	ហ	ABP06654	Abp06654 Human ORF
24	57	30.2	107	8	ABO55204	Abo55204 Human gen

7 7 7 7 8 9 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	
330 229 239 239 239 239 239 239 239 239 239	
488 488 1416 1523 1543 111 1036 1036 115 268 226 226 319 319 369 369 369 369 369 369 369 369 369	;
. r 4 v 6 v 5 v 6 v 6 v 6 v 6 v 6 v 6 v 6 v 6	ı
ADG 7027 ADG12082 ABB66066 AAB30107 ABB53773 ABP64335 ABP64335 ABP95019 AAB95019 AAB95019 AAB95016 AAG49849 AAG49849 AAG49849 AAG49853 AAAG49853	1
•	
Adl12082 Adl12082 Adl12082 Ade55373 Abb66335 Abb64335 Abb95016 Aag45467 Aag4985467 Aag19454 Aag19454 Aag19454 Aag19454 Aag19454 Aag19454 Aag19454 Aag19454 Aag19454 Aag19454 Aag19454 Aag19454 Aag19454 Aag19454 Aag19454 Aag19454 Aag19454 Aag19454	* A ~ 77 0 0 7
Pseudomon Drosophil Drosophil Drosophil Drosophil Human ORF M. xanthu Human Pro Arabidops Novel hum Arabidops	מפייקישטמ

## ALIGNMENTS

RESULT 1 AAW79677 Gastrointestinal tract; GI tract; cancer; disease; detection; CS198; human; predisposition; treatment; Barret's oesophagus; gastric ulcer; gastritis; leiomyoma; polyps; Crohn's disease; ulcerative colitis; AAW79677 standard; protein; 36 AA. Synthetic CS198 derived peptide #1. 11-JAN-1999 AAW79677; 31-MAR-1997; 30-MAR-1998; 08-OCT-1998 Synthetic. WO9844159-A1 pancreatitis. (first entry) 97US-00828855 98WO-US006251.

(ABBO ) ABBOTT LAB

Billing-Medel PA, Cohen M, Colpitts TL, Friedman PN, Gordon J; Granados EN, Hayden M, Hodges SC, Klass MR, Kratochvil JD; Roberts-Rapp L, Russell JC, Stroupe SD;

WPI; 1998-542714/46.

New gastrointestinal polynucleotides, CS198, and their detection - used for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastritis.

Claim 26; Page 102; 127pp; English.

AAW79677-W79680 are synthetic CS198 derived peptide fragments which are used in a method to detect the presence of a target human CS198 polynucleotide in a test sample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be used in detecting, diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oesophagus, gastric ulcer, cancer, Barret's Crohn's disease,

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SXS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
The invention relates to a method of detecting the presence of a target CS 198 polynucleotide comprising contacting the test sample with at least one CS 198-specific polynucleotide. The method is useful for detecting diseases of the gastrointestinal (GI) tract organs, particularly cancer. The CS 198 polynucleotides, polypeptides and antibodies are useful for detecting, diagnosing, staging, monitoring, prognosticating, preventing, treating or determining predisposition to diseases and conditions of the GI tract such as cancer, gastric ulcer, gastritis, Crohn's disease, ulcerative colitis, pancreatitis and Barret's oesophagus. The CS 198 polypeptides are useful as standards or reagents in diagnostic
                                                                                                                                                     Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, comprises contacting test sample with at least one CS 198-specific polynucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CS 198; gastrointestinal tract disease; GI tract; cancer; gastric ulcer; gastritis; Crohn's disease; ulcerative colitis; pancreatitis; Barret's oesophagus; gene therapy; drug screening; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 36 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         colitis, and pancreatitis
                                                                                                                                Claim 17;
                                                                                                                                                                                                      WPI; 2001-496163/54.
                                                                                                                                                                                                                           Roberts-Rapp
                                                                                                                                                                                                                                       Granados
                                                                                                                                                                                                                                                   Billingel
                                                                                                                                                                                                                                                                                                                      (HAYD/)
(HODG/)
(KLAS/)
                                                                                                                                                                                                                                                                                                                                                                                            (COLP/)
                                                                                                                                                                                                                                                                                                                                                                                                                                          31-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US2001010904-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human CS 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAE07320;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAE07320
                                                                                                                                                                                                                                                                                                                                                                     (FRIE/)
                                                                                                                                                                                                                                                                                                                                                           (GRAN/)
                                                                                                                                                                                                                                                                                                             KRAT/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                                                                                                                        KRATOCHVIL J D.
ROBERTS-RAPP L.
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                HAYDEN M.
HODGES S C.
                                                                                                                                                                                                                                                                                                                                                                     FRIEDMAN
GORDON J.
                                                                                                                                                                                                                                                                                                                                                                                                      COHEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                           GRANADOS
                                                                                                                                                                                                                                                                                                                                                                                                                  BILLINGEL P A.
                                                                                                                                                                                                                                                                                                                      KLASS M R.
                                                                                                                                                                                                                                       恩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                                                                                              PA,
                                                                                                                                Page 51; 68pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%;
llarity 100.0%;
Conservative (
                                                                                                                                                                                                                           Ļ
                                                                                                                                                                                                                           , Cohen M,
Hayden M,
L, Russell
                                                                                                                                                                                                                                                                                                                                                NJ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                          97US-00828855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98US-00050516.
                                                                                                                                                                                                                                                                                                                                                                            Z H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #
                                                                                                                                English.
                                                                                                                                                                                                                           Colpitts TL, Friedman Hodges SC, Klass MR, JC, Stroupe SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 189; DB 2;
Pred. No. 6.1e-18;
                                                                                                                                                                                                                                                  Friedman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              36
                                                                                                                                                                                                                                       PN, Gordon J;
Kratochvil JD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
RESULT 3
ADA26380
ID ADA26380
ID ADA26380
ID ADA26380
ID ADA26380
ID ADA22
XX ADA2
AC ADA22
XX Synt
XX CS19
ID Synt
XX GS19
XX GS19
XX GS10
PA 01-A
XX B11
PA (CO)
PA (RO)
PA 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         និនិនិនិនិនិនិនិនិនិនិនិ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                immunoassays, as components or as target sites for various therapies. Antibodies directed against at least one epitope contained within these polypeptides are useful as delivery agents for therapeutic agents, in diagnostic tests and for screening for conditions or diseases associated with CS 198, particularly cancer. Monoclonal antibodies may also be used for the generation of chimeric antibodies for therapeutic use. The CS 198 polynucleotide is also useful in gene therapy and drug screening. The method of the invention provides an alternative, non-surgical diagnostic method capable of detecting early stage GI tract disease such as cancer. The present sequence is a peptide derived from human CS 198 polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gastrointestinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic peptide based
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 36 AA;
                                                                                                                                                                                                                                                                                                                                                                                                   (GORD/)
(GRAN/)
(HAYD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CS198; cancer diagnosis; cancer staging; cancer monitoring;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADA26380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADA26380 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                consensus sequence
                                                                                                                                                                                                   Billingel PA,
Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (COLP/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (COHE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31-MAR-1997;
30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-OCT-2002; 2002US-00278547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-MAY-2003
                                                                                                                                                                                                                                                                     (RUSS/)
                                                                                                                                                                                                                                                                                                                                                            (KILAS/)
                                                                                                                                                                                                                                                                                                                                                                                 (HODG/)
                                                                                                                                                                                                                                                                                                                                     KRAT/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          prognosticating; cancer prevention; can
intestinal tract disorder; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                                                                                                                 GORDON J.
GRAMADOS E N.
HAYDEN M A.
HODGES S C.
KLASS M R.
KRATOCHVIL J I
ROBERTS -RAPP I
RUSEIL J C.
STROUPE S. D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COLPITTS T L. FRIEDMAN P N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BILLINGEL P A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COHEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                            Hayden MA,
L, Russell
                                                                                                                                                                              ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97US-00828855.
98US-00050516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                 ٦٦
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                            Colpitts TL,
Hodges SC,
JC, Stroupe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CS198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         189;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       No.
                                                                                                                                                                              Klass
SD;
                                                                                                                                                                                                     Friedman
Klass MR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6.1e-18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         36
                                                                                                                                                                                                     PN, Gordon
Kratochvil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                36;
                                                                                                                                                                                                     មូរៈ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

Detecting the presence of a target CS198 polynucleotide in a test san comprises contacting the sample with a CS198 specific polynucleotide detecting the presence of the target CS198 polynucleotide in the test

sample

WPI; 2003-596961/56

Claim

Page

51;

67pp;

English

invention 17;

describes

a method of detecting the presence of a target a test sample. The method comprises contacting

٠.

CS198 polynucleotide in a test sample. The method comprises contacting the test sample with at least one CS198 specific polynucleotide or its complement, and detecting the presence of the target CS198 polynucleotide in the test sample, where the CS198-specific polynucleotide has at least 50% identity to a polynucleotide having any of the 27 fully defined sequences of 34-2894 bp (S1-27) given in the specification, or their fragments or complements. The composition and methods are useful in

diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition of an individual to, diseases and conditions of the gastrointestinal tract, e.g. cancer and in gene therapy. This is the amino acid sequence of a synthetic peptide based on the predicted human CS198 protein sequence derived from the CS198 consensus sequence shown in seq id 27.

Query Match Best Local S Matches 36

Similarity

100.0%;

Score 189; DB 6; Pred. No. 6.1e-18;

Length

36;

36;

Conservative

0;

Mismatches

0

Indels

0

Gaps

0

맑

XXXXX XXXXX

MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36

Sequence 36

**8** 

```
RRESULT 4
ADN1713
ID ADN113
XX
XX
ADN171
XX
CS15
XX
CS15
XX
Gast
XX
GS1
PA
(GCI)
PA
(GCI)
PA
(GCI)
PA
(GRI)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US2004043406-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gastrointestinal tract;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADN17173 standard; peptide; 36 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31-MAR-1997;
30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22-AUG-2003; 2003US-00646873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                04-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CS198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADN17173
Diagnosing diseases detecting aberrant e
                                                                     WPI; 2004-313754/29
                                                                                                          Roberts-Rapp
                                                                                                                                                        Billingel PA,
                                                                                                                                                                                                                       (ROBE/)
                                                                                                                                                                                                                                                                (HODG/)
(KLAS/)
(KRAT/)
                                                                                                                                                                                                                                                                                                                                                        (GORD/)
                                                                                                                                                                                                                                                                                                                                                                                                                         (COTE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (/TTIB
                                                                                                                                                                                                                                                                                                                                    HAYD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         peptide
                                                                                                                                                                                                                                                                                                            GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
                                                                                                                                                                                                                                                                                                                                                                                              COHEN M.
COLPITTS T L.
FRIEDMAN P N.
                                                                                                                                                                                                                                            KLASS M R.
KRATOCHVIL J
ROBERTS-RAPP
                                                                                                                                                                                                    RUSSELL
STROUPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BILLINGEL P A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u></u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first
                                                                                                            ۲
                                                                                                                                   Cohen
Hayden
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97US-00828855
98US-00050516
                                                                                                                                                                                                    800.
                                                                                                               Russell
s such as cancer of the expression or activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          entry)
                                                                                                                                   ¥.¥
                                                                                                                                                                                                                                                -0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GI tract; CS198; cancer; gene therapy
                                                                                                               'n,
                                                                                                                                 Colpitts TL
Hodges SC,
                                                                                                            Stroupe
                                                                                                                                                        Į,
                                                                                                                                   Friedman
Klass MR,
                                                                                                               SD;
  gastrointestinal tract, b
of the CS198 polypeptide,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               36
                                                                                                                                                        Ŋ.
                                                                                                                                      Kratochvil
                                                                                                                                      g;
                           à
```

WPI;

1998-542714/46.

Roberts-Rapp L,

Hayden M,

Kratochvil

Ä

Russell JC,

Claim

Page 103;

127pp;

English. .

and

gastric ulcer, colitis, and pa

and pancreatitis

leiomyoma,

polyps,

Crohn's disease,

oesophagus, ulcerative

This sequence represents the C-terminal of the human CS198 protein which is used in a method to detect the presence of a target CS198 polynucleotide in a test sample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be used in detecting, diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's ocsophagus,

New gastrointestinal polynuclectides, CS198, and their detection - for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastriti

gastritis.

used

```
á
                                               Query Match
Best Local S
Matches 36
                                                                                                                                                                 the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polynucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of diseases or conditions associated with aberrant expression or activity of the CS198 polypeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 peptide used to illustrate the method of the
                                                                                                                     Sequence 36 AA;
                                                                                                                                                                                                                                                                                                                                    Claim
                                                                                                                                                                                                                                                                                                                                                                       associated treatment methods
                                                                                                                                                      invention
                                                                                                                                                                                                                                                                           invention relates to reagents and methods for detecting diseases of gastrointestinal (GI) tract. The method involves detecting the
                                                                                                                                                                                                                                                                                                                                    17;
                                                 36;
                                                                   Similarity
MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                    SEQ
                                                 Conservative
                                                                                                                                                                                                                                                                                                                                    ID NO 43; 67pp; English
                                                                  100.0%;
                                                   <u>.</u>
                                                 Score 189; DB 8;
Pred. No. 6.1e-18;
; Mismatches 0;
                                                                                    Length 36;
                                                       Indels
                                                       0
                                                       Gaps
```

```
human; predisposition; treatment; Barı gastritis; leiomyoma; polyps; Crohn's
                                                                                                                                                                                                                                                                                                                Gastrointestinal tract; GI tract; cancer; disease; detection; CS198; human; predisposition; treatment; Barret's oesophagus; gastric ulcer
                                                                                                                                                                                                                                                                                                                                                                  Human CS198 protein C-terminal
                                                                                                                                                                                                                                                                                                                                                                                                      11-JAN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                        AAW79681;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAW79681 standard;
                 Billing-Medel PA,
Granados EN, Hay
                                                                                                                                         30-MAR-1998;
                                                                                                                                                                           08-OCT-1998
                                                                                                                                                                                                             WO9844159-A1
                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                              pancreatitis.
                                                                       (ABBO ) ABBOTT LAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              μ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                       97US-00828855
                                                                                                                                           98WO-US006251.
                                   Cohen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein;
M, Colpitts TL,
Hodges SC, Klass
JC, Stroupe SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₽
                       Friedman PN,
MR, Kratoch
                                          Gordon J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
RESULT 6
AAE07324
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           XS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
         The invention relates to a method of detecting the presence of a target CS 198 polynucleotide comprising contacting the test sample with at least one CS 198-specific polynucleotide. The method is useful for detecting diseases of the gastrointestinal (GI) tract organs, particularly cancer. The CS 198 polynucleotides, polypeptides and antibodies are useful for detecting, diagnosing, staging, monitoring, prognosticating, preventing, treating or determining predisposition to diseases and conditions of the GI tract such as cancer, gastric ulcer, gastritis, Crohn's disease, ulcerative colitis, pancreatitis and Barret's oesophagus. The CS 198 polypeptides are useful as standards or respents in diagnostic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CS 198; gastrointestinal tract disease; GI tract; cancer; gastric gastritis; Crohn's disease; ulcerative colitis; pancreatitis; Barret's oesophagus; gene therapy; drug screening; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                    Claim 17; Page 52-53;
                                                                                                                                                                           Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, comprise contacting test sample with at least one CS 198-specific polynucleotide.
                                                                                                                                                                                                                                WPI; 2001-496163/54.
                                                                                                                                                                                                                                                                    Billingel PA,
Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                          (FRIE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                   (COLP/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      31-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       02-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US2001010904-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human CS 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAE07324;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAE07324 standard; protein; 215
                                                                                                                                                                                                                                                     Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                             (KLAS/
                                                                                                                                                                                                                                                                                                                                                                      (HAYD/
                                                                                                                                                                                                                                                                                                                                  ROBE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                        ROBERTS-RAPP : RUSSELL J C. STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                     COLPITTS T L. FRIEDMAN P N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                     HAYDEN M.
HODGES S C.
                                                                                                                                                                                                                                                                                                                                                                                                           GORDON
                                                                                                                                                                                                                                                                                                                                                                                                                                                  COHEN M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             BILLINGEL P A.
                                                                                                                                                                                                                                                                                                                                             KRATOCHVIL J
                                                                                                                                                                                                                                                                                                                                                           KLASS M R.
                                                                                                                                                                                                                                                                                                                                                                                              GRANADOS E N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
ilarity 100.0%;
Conservative 0
                                                                                                                                                                                                                                                      Hayden M,
L, Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein C-terminal portion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97US-00828855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98US-00050516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          entry)
                                                                                                                                                  68pp;
                                                                                                                                                                                                                                                      Colpitts TL, Friedman Hodges SC, Klass MR, JC, Stroupe SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
 or as target sites for
                                                                                                                                                    English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 189; DB 2;
Pred. No. 4.4e-17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                              Friedman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                    PN, Gordon J;
Kratochvil JD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
 therapies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                           comprises
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

Claim

52;

Page

52;

67pp;

sample.

Detecting the presence of a target CS198 polynucleotide in a test sample comprises contacting the sample with a CS198 specific polynucleotide and detecting the presence of the target CS198 polynucleotide in the test

```
RESULT 7
ADAA6384
ID ADAX
XX ADAX
XX ADAX
XX CS11
XX CS11
XX CS11
XX GS1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Antibodies directed against at least one epitope contained within these polypeptides are useful as delivery agents for therapeutic agents, in diagnostic tests and for screening for conditions or diseases associated with CS 198, particularly cancer. Monoclonal antibodies may also be used for the generation of chimeric antibodies for therapeutic use. The CS 198 polymucleotide is also useful in gene therapy and drug screening. The method of the invention provides an alternative, non-surgical diagnostic method capable of detecting early stage GI tract disease such as cancer. The present sequence is C-terminal portion of human CS 198 polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CS198; cancer diagnosis; cancer staging; cance cancer prognosticating; cancer prevention; can gastrointestinal tract disorder; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic peptide based on CS198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADA26384 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                  Billingel PA,
Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (COHE/)
(COLP/)
(FRIE/)
(GORD/)
(GRAN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US2003082619-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                  (HAYD/)
                                                                                                                                                                                  WPI; 2003-596961/56.
                                                                                                                                                                                                                          Roberts-Rapp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23-OCT-2002; 2002US-00278547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (BILL/)
                                                                                                                                                                                                                                                                                                                                           RUSS/)
                                                                                                                                                                                                                                                                                                                                                                  ROBE/)
                                                                                                                                                                                                                                                                                                                                                                                       (KRAT/)
                                                                                                                                                                                                                                                                                                                                                                                                             KLAS/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           36;
                                                                                                                                                                                                                                                                                                                                                                                                                             COLPITIS T L.
FRIEDMAN P N.
GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                                                                                                                                                                 ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                     KLASS M R.
KRATOCHVIL J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BILLINGEL P A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COHEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                215 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                          ŗ
                                                                                                                                                                                                                          , Cohen M,
Hayden MA,
L, Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97US-00828855.
98US-00050516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                50
                                                                                                                                                                                                                          Colpitts TL,
Hodges SC,
JC, Stroupe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              189; DB 4;
No. 4.4e-17;
                                                                                                                                                                                                                               Klass MR,
SD;
                                                                                                                                                                                                                                                                         Friedman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cancer monitoring;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               36
                                                                                                                                                                                                                                                                           PN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 215;
                                                                                                                                                                                                                                                      N, Gordon
Kratochvil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                      g ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8888888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention describes a method of detecting the presence of a target CS198 polynucleotide in a test sample. The method comprises contacting the test sample with at least one CS198 specific polynucleotide or its complement, and detecting the presence of the target CS198 polynucleotide in the test sample, where the CS198-specific polynucleotide has at least contacting to a polynucleotide having any of the 27 fully defined sequences of 34-2894 bp (S1-27) given in the specification, or their fragments or complements. The composition and methods are useful in clasmosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition of an individual to, diseases and conditions of the gastrointestinal tract, e.g. cancer and in gene therapy. This is the amino acid sequence of a synthetic peptide based on the predicted human CS198 protein sequence derived from the CS198 consensus sequence shown in seq id 27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                              Billingel PA,
Granados EN,
Roberts-Rapp I
                                                                                                                                                                                                                                                                                                31-MAR-1997;
30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                          04-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                       Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                             Gastrointestinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                     CS198 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADN17177;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADN17177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 215
                                                                                                                                                                                                                                                                                                                                   22-AUG-2003; 2003US-00646873
                                                                                                                                                                                                                                                                                                                                                                                 US2004043406-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17-JUN-2004
           Diagnosing diseases such as cancer of the gastrointestinal tract, detecting aberrant expression or activity of the CS198 polypeptid associated treatment methods
                                                                                                                                                                (GORD/)
(GRAN/)
(HAYD/)
(HODG/)
(KLAS/)
(KRAT/)
                                                           WPI; 2004-313754/29
                                                                                                                                                                                                                                                 (COLP/)
                                                                                                                                                                                                                                                                        (/TTIB
                                                                                                                                                                                                                                       FRIE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ۳
                                                                                                                             GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
KLASS M R.
KRATOCHVIL J D
ROBERTS - RAPP L
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                   COLPITTS T L.
FRIEDMAN P N.
                                                                                                                                                                                                                                                                          BILLINGEL P A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                Hayden MA,
L, Russell
                                                                                 ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first
                                                                                                                                                                                                                                                                                                97US-00828855.
98US-00050516.
                                                                                                                                                                                                                                                                                                                                                                                                                                 tract;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                       r o
                                                                                                                                                                                                                                                                                                                                                                                                                                 ពួ
                                                                                Colpitts TL,
Hodges SC,
UC, Stroupe
                                                                                                                                                                                                                                                                                                                                                                                                                                 tract;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 189; DB 6;
Pred. No. 4.4e-17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                 CS198; cancer; gene therapy
                                                                                 Friedman
Klass MR,
SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                             PN, Gordon
Kratochvil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              215;
                                                                                             វិព្
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>.</u>.
```

polypeptide, and

γď

Claim

20;

Page 288; 6221pp; English

production

The invention relates to polynucleotides (AAK51456-AAK53435) and encoded polypeptides (AAM78323-AAM80302) that exhibit activity electrocytokine, cell proliferation or cell differentiation or which may

(AAK51456-AAK53435) and the

elating

ating to induce

```
RESULT 9
AAM/1957
ID AAM/197
XX AAM/197
XX AAM/197
XX AAM/197
XX AAM/197
XX Huma
XX Huma
XX Huma
XX Homc
XX Tang
XX Homc
XX Homc
XX Homc
XX Tang
XX Homc
XX Homc
XX Tang
XX Ta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ##SSSSSSSSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           03-FEB-2000; 2000US-00496914.
27-APR-2000; 2000US-00560875.
20-JUN-2000; 2000US-005598075.
19-UL-2000; 2000US-00620325.
01-SEP-2000; 2000US-00654936.
15-SEP-2000; 2000US-00653561.
20-CCT-2000; 2000US-00653325.
30-NOV-2000; 2000US-00728422.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to reagents and methods for detecting diseases of the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polynucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of diseases or conditions associated with aberrant expression or activity of the CS198 polypeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 protein used to illustrate the method of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; cytokine; cell proliferation; cell differentiation; gene therapy; vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorder; arthritis; inflammation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human protein SEQ ID NO 3220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAM79574;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAM79574 standard; protein; 672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 17; SEQ
                                                                                                                                                                                                                                                WPI; 2001-476283/51.
N-PSDB; AAK52707.
                                                                                                                                                                                                                                                                                                                              Xue
                                                                                                                                                                                                                                                                                                                                                     Tang
Ma Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-FEB-2001; 2001WO-US004098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200157190-A2
                                                                                                                                                                       Nucleic acids encoding polypeptides with cytokine-like activities, useful in diagnosis and gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                               (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                      y YT, Liu C,
t, Zhao QA, 1
AJ, Yang Y,
                                                                                                                                                                                                                                                                                                                              ¥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         \mathbf{\mu}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                               HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                215 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
ilarity 100.0%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ID NO 47; 67pp; English
                                                                                                                                                                                                                                                                                                                              Wang D, '
                                                                                                                                                                                                                                                                                                                              Drmanac RT,
Wang D, Wang
Wejhrman T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 189; DB 8;
Pred. No. 4.4e-17;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                              Asundi V, Zh
g J, Zhang J,
Goodrich R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                     Zhou P, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                  ž
                                                                                                                                                                                                                                                                                                                                                           u C,
                                                                                                                                                                                                                                                                                                                                                                                  Cao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                           Y;
Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                ZW;
```

0

밁 S

0

```
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopolesis regulating activity, tissue growth factor activity, immunomodulatory activity and activin/inhibin activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system discorders, arthritis and inflammation. Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666 (AAM80020) are omitted as the relevant pages from the sequence listing were missing at the time of publication
                                             diagnosing, staging, monitoring, prognosticating, preventing or treating or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oesophagus, gastric ulcer, gastritis, leiomyoma, polyps, Crohn's disease, ulcerative colitis, and
                                                                                                                This sequence represents the human CS198 protein which is used in a method to detect the presence of a target CS198 polynucleotide in a te sample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be used in detecting,
                                                                                                                                                                                                                                    New gastrointestinal polynucleotides, CS1: for developing products for the diagnosis gastrointestinal disorders, e.g. cancers,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gastrointestinal tract; GI tract; cancer; disease; detection; CS19 human; predisposition; treatment; Barret's oesophagus; gastric ulc gastritis; leiomyoma; polyps; Crohn's disease; ulcerative colitis;
                                                                                                                                                                                                                                                                                                                                                                         Billing-Medel PA,
                                                                                                                                                                                                    Claim 26; Page 100-102; 127pp; English.
                                                                                                                                                                                                                                                                                                                                                          Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             08-OCT-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              pancreatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAW79676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAW79676 standard; protein; 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 672 AA;
                                                                                                                                                                                                                                                                                                        WPI; 1998-542714/46.
                                                                                                                                                                                                                                                                                                                                      Roberts-Rapp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9844159-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human CS198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11-JAN-1999
                                                                                                                                                                                                                                                                                                                                                                                                           (ABBO)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              варіепв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                        ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                        Hayden M,
L, Russell
                                                                                                                                                                                                                                                                                                                                                                                                           LAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                            97US-00828855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98WO-US006251
                                                                                                                                                                                                                                                                                                                                                                        Cohen M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                     M, Colpitts TL, Frie
Hodges SC, Klass MR,
JC, Stroupe SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 189; DB 4; L
Pred. No. 1.5e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ξ
                                                                                                                                                                                                                                    CS198, and their detection - us osis and treatment of ers, gastric ulcer or gastritis.
                                                                                                                                                                                                                                                                                                                                                                         Friedman PN,
                                                                                                                                                                                                                                                                                                                                                          Kratochvil JD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          672;
                                                                                                                                                                                                                                                                                                                                                                         Gordon J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CS198;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                  treating,
                                                                                                                                                     test
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

Query Match

100.0%;

Score 189;

B

2

Length 679;

The CS 198 polynucleotides, polypeptides and antibodies are useful for detecting, diagnosing, staging, monitoring, prognosticating, preventing, treating or determining predisposition to diseases and conditions of the GI tract such as cancer, gastric ulcer, gastritis, Crohn's disease, ulcerative colitis, pancreatitis and Barret's oesophagus. The CS 198 polypeptides are useful as standards or reagents in diagnostic

The invention relates to a method of detecting the presence of a target CS 198 polynucleotide comprising contacting the test sample with at least one CS 198-specific polynucleotide. The method is useful for detecting diseases of the gastrointestinal (GI) tract organs, particularly cancer.

Sequence 679 AA;

```
ARESULT 11
AREOTAT19
AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9
AC AREOTAT9

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity
                                                                                                                                                                                                                                                                                       Detecting the presence of target CS 198 polymucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, comprise contacting test sample with at least one CS 198-specific polymucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Billingel PA, Cohen M, Granados EN, Hayden M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CS 198; gastrointestinal tract disease; GI tract; cancer; gas
gastritis; Crohn's disease; ulcerative colitis; pancreatitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human CS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAE07319
                                                                                                                                                                                                                                                Claim 17; Page 49-51; 68pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-496163/54.
                                                                                                                                                                                                                                                                                                                                                                                                                                             Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (HAYD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (COHE/)
(COLP/)
(FRIE/)
(GORD/)
(GRAN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Barret's oesophagus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (KRAT/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (KLAS/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (/TTIE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                 AAD13637.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HAYDEN M.
HODGES S C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BILLINGEL P A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KRATOCHVIL J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KLASS M R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GORDON J.
GRANADOS E N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COLPITTS T L. FRIEDMAN P N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COHEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      198 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Crohn's disease; ulcerative correcting; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97US-00828855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98US-00050516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "Encoded by CGGN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; +1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                Colpitts TL, Friedman Hodges SC, Klass MR, JC, Stroupe SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Friedman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.6e-16;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PN, Gordon J;
Kratochvil JD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gastric ulcer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

0

```
AAM78500LT 12
AAM78500
ID AAM78
XX AAM78
XX O6-NC
XX Human
XX Human
XX Human
XX Human
XX Homo
XX Homo
XX Homo
XX O9-AL
XX O9-AL
PR 27-AL
PR 27-AL
PR 11-SU
P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ន្តន្តន្តន្តន្តន្តន្ត្
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              03-FEB-2000; 2000US-00496914.
27-APR-2000; 2000US-00560875.
20-JUN-2000; 2000US-00598075.
19-JUL-2000; 2000US-00620325.
01-SEP-2000; 2000US-0063936.
15-SEP-2000; 2000US-00693325.
20-OCT-2000; 2000US-00693325.
30-NOV-2000; 2000US-00728422.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              immunoassays, as components or as target sites for various therapies. Antibodies directed against at least one epitope contained within these polypeptides are useful as delivery agents for therapeutic agents, in diagnostic tests and for screening for conditions or diseases associated with CS 198, particularly cancer. Monoclonal antibodies may also be used for the generation of chimeric antibodies for therapeutic use. The CS 198 polynucleotide is also useful in gene therapy and drug screening. The method of the invention provides an alternative, non-surgical diagnostic method capable of detecting early stage GI tract disease such as cancer. The present sequence is human CS 198 polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; cytokine; cell proliferation; cell differentiation; gene therapy; vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorder; arthritis; inflammation.
The invention relates to polynucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-FEB-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200157190-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human protein SEQ ID NO 1252.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAM78590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAM78590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 679
                                                                                                                                                                                                             Nucleic acids encoding polypeptides with cytokine-like activities, useful in diagnosis and gene therapy.
                                                                                                                                                               Claim 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                  y YT, Liu C,
t, Zhao QA, 1
AJ, Yang Y,
                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                   2001-476283/51.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                            Page 3512-3514; 6221pp; English
                                                                                                                                                                                                                                                                                                                                      QA, Wang D, Y, Wejhrman 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
llarity 100.0%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001WO-US004098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein;
                                                                                                                                                                                                                                                                                                                                                                          RT,
Wang
n T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 189; DB 4;
Pred. No. 1.6e-16;
                                                                                                                                                                                                                                                                                                                                                                          Asundi V, Zho
J J, Zhang J,
Goodrich R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                              Zhou
                                                                                                                                                                                                                                                                                                                                                                                                     Ren
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              36
                                                                                                                                                                                                                                                                                                                                                                                                                              ٦,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 679;
                                                                                                                                                                                                                                                                                                                                                                                                     'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                              ž
                                                                                                                                                                                                                                                                                                                                                                                                     u C,
                                                                                                                                                                                                                                                                                                                                                                                                     Cao
R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                     Y;
Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                        ZW;
                                                                                  ç
```

```
RESULT 13
ADA26379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               88888888%&
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoiesis regulating activity, tissue growth factor activity, immunomodulatory activity and activin/inhibin activity and may be useful in the diagnosis and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            treatment of cancer, leukaemia, nervous system disorders, arthritis and inflammation. Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666 (AAM80020) are omitted as the relevant pages from the
                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            gastrointestinal tract disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADA26379;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADA26379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 679 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence listing
                                                                                                                                    Billingel PA,
Granados EN,
                                                                                                                                                                                                                                                                                   (COTb/)
(COHE/)
                                                                                                                                                                                                                                                                                                                                   30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                              31-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                    23-OCT-2002;
                                                                                                                                                                                                                                                                                                                                                                                           01-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                US2003082619-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CS198; cancer diagnosis; cancer staging; cancer monitoring;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Predicted amino acid sequence of the CS198 protein
                                                                             Detecting
                                                                                                                                                                                                                 (KLAS,
                                                                                                     WPI; 2003-596961/56.
                                                                                                                        Roberts-Rapp L,
                                                                                                                                                                                                                                                     (GRAN
                                                      detecting
                                                                 comprises
                                                                                                                                                                                             (ROBE/
                                                                                                                                                                                                       KRAT,
                                                                                                                                                                                                                              HODG/
                                                                                                                                                                                                                                         HAYD/
                                                                                                                                                                                                                                                               GORD
                                                                                                                                                                                                                                                                         FRIE/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                  KLASS M R.
KRATOCHVIL J I
ROBERTS-RAPP I
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       prognosticating; cancer prevention; cancer;
                                                                                                                                                                                                                          COHEN M.
COLPITTS T L.
FRIEDMAN P N.
GORDON J.
GRANADOS E N.
HAYDEN M A.
HAYDEN M A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                            BILLINGEL P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           standard; protein;
                                                     the presence of a target CS198 polynucleotide in a test sample contacting the sample with a CS198 specific polynucleotide and the presence of the target CS198 polynucleotide in the test
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
llarity 100.0%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                   2002US-00278547
                                                                                                                         , Cohen M,
Hayden MA,
L, Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                  97US-00828855.
98US-00050516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    were missing at the time of publication
                                                                                                                                                                                           r o
                                                                                                                        Colpitts TL,
Hodges SC,
JC, Stroupe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 189; DB 4;
Pred. No. 1.6e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene therapy
                                                                                                                          Klass
SD;
                                                                                                                                     Friedman
Klass MR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>.</u>
                                                                                                                                       PN, Gordon J;
Kratochvil JD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

The invention

describes a method of detecting the presence

of a

Claim

17;

Page

49-50; 67pp; English

٥,

```
ARESULT 14
ADG14341
ID
XX ADG14
AX Humar
XX Homo
PN W0200
XX Homo
PN W0200
AX Homo
AX H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CS198 polynucleotide in a test sample. The method comprises contacting the test sample with at least one CS198 specific polynucleotide or its complement, and detecting the presence of the target CS198 polynucleotide in the test sample, where the CS198-specific polynucleotide has at least 50% identity to a polynucleotide having any of the 27 fully defined sequences of 34-2894 bp (S1-27) given in the specification, or their fragments or complements. The composition and methods are useful in diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition of an individual to, diseases and conditions of the gastrointestinal tract, e.g. cancer and in gene therapy. This is the predicted amino acid sequence of the human CS198 protein derived from the CS198 consensus sequence shown in seq id 27.
                                                                                                                                  coding sequences (ADG14340-ADG14345). The coding sequences are useful for detecting and screening proliferative insulin-producing cells as well as differentiation and proliferation of such cells and their precursors as analogous cells in treatment of e.g. PHHI and diseases due to differentiation/proliferation abnormality, diseases of the nervous system and pancreas. The coding sequences are also useful as spontaneous proliferation models of pencreas beta-cells. The novel genes NC1, NC2 and NC3 were isolated from the pancreas of PHHI patients, which were used in testing for the detection of proliferative insulin-producing cells or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       06-MAR-2003; 2003WO-JP002620.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human NC2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADG14341 standard; protein; 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 1; SEQ ID NO 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              patient-expressed genes for detecting and scr
insulin-producing cells in treatment of PHHI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Familial persistent hyperinsulinemic hypoglycemia of infancy (PHHI)
patient-expressed genes for detecting and screening e.g. proliferat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2003-767524/72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Niwa H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-MAR-2002; 2002JP-00071592.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-SEP-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            neuroprotective.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; NC1; NC2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26-FEB-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADG14341;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 679
                                                                                                    pancreas beta-cells by Northern analysis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (KANF )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO2003078631-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                present invention relates to human NC1, NC2 and NC3 proteins and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADG14344.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KANEKA CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Yamashita K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NC3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       34pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PHHI; pancreas beta-cell; insulin; antidiabetic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 189; DB 6;
Pred. No. 1.6e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    screening e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    proliferative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

Sequence 679

Query Match

100.0%;

Score 189;

BB œ ,,

Length 679;

Sequence 679

B

S

밁

999999999999988

```
RESULT 15
ADN17172
ID ADN17
XX
ADN17172
XX
AC ADN17
XX
CS Unide
CC Unive
XX
CC Of the
CC OF TH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                The invention relates to reagents and methods for detecting diseases of the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polynucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of diseases or conditions associated with abstrant expression or activity of the CS198 polypeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 protein used to illustrate the method of the
                                                                                                                                                                                                                                                                                                                                                         Diagnosing diseases such as cancer of the gastrointestinal tract, detecting aberrant expression or activity of the CS198 polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31-MAR-1997;
30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CS198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADN17172;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADN17172 standard; protein; 679 AA.
                                                                                                                                                                                                                                                                                                                                      associated treatment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Granados
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Billingel PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22-AUG-2003; 2003US-00646873.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            04-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US2004043406-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gastrointestinal tract; GI tract; CS198; cancer; gene therapy.
                                                                                                                                                                                                                                                                                       Claim 17; SEQ ID NO 42; 67pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                   GENBANK; D87440
                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2004-313754/29.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (KLAS/)
                                              present sequence invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Roberts-Rapp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (COLE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (BILL/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ROBE/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KRAT/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HAYD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GRAN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FRIE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KRATOCHVIL J ROBERTS-RAPP RUSSELL J C. STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BILLINGEL P A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COHEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KLASS M R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COLPITTS T L. FRIEDMAN P N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EZ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŗ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cohen
Hayden
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97US-00828855
98US-00050516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ohen M,
yden MA,
Russell
                                                                                                                                                                                                                                                                                                                                           methods.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ۲V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 189; DB 7;
100.0%; Pred. No. 1.6e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Colpitts TL,
Hodges SC,
JC, Stroupe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Klass MR,
SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Friedman PN, Gordon
Klass MR, Kratochvil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                            polypeptide,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 មូរ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                     γď
                                                                                                                                                                                                                                                                                                                                                                 and
```

Search completed: March 3, 2006, 13:35:20 Job time : 21.242 secs	Qy 1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36	Best Local Similarity 100.0%; Pred. No. 1.6e-16; Matches 36; Conservative 0; Mismatches 0; Indels 0.
		0; Gaps
		g 0,
		••

Colocal such a Spod sint

```
Regult
No.
                                                                                                                                                                                                                                                                                                                                                                                                          Database
                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Run on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
 22222222111
                                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed
and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                    Score
53
53
53
53
52
52
52
52
52
52
53
53
51
51
51
51
51
                                                                                                                                                                                                        53.5
                                                                                                                                                                                                                                               54.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein search, using sw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-646-873-43
189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BLOSUM62
Gapop 10.0 , Gapext 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    March 3, 2006, 13:26:31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              283416 seqs, 96216763 residues
                                                                                                                                                                                                                                                                                                                                                                     PIR_80:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
                                                                                                                                                                                                                                                                 100.0
 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenCore version 5.1.7 Copyright (c) 1993 - 2006 Biocceleration Ltd
                                                                                                                                                                                                                                                                                   Length
                                                        1126
292
197
226
324
324
372
572
572
587
852
1829
                                                                                                                                                                                                                                                                                     멂
                                                                                          S51660
S71093
F90166
T12496
A57713
                                                                                                                                                                                                                                                                                     딩
                           G87304
H87315
T14280
F86387
GMDG
PC4365
S27850
                                                                                                                                                   T18353
T20801
T02737
        JE0086
T18357
                                                                                                                                         T36584
                                                                                                                                                                                         H96827
                                                                                                                                                                                                         S39866
                                                                                                                                                                                                                            D86165
                                                                                                                                                                                                                                                                 T00636
                                                                                                                                                                                                                                                                                                                                                                                                                             summaries
                                                                                                                                                                                                                                                                                                                SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mode1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Search time 2.27405 Seconds (without alignments)
1523.185 Million cell updat
                  gastrin precursor
calcium-binding pr
surface antigen Tc
SH3-domain binding
                                                                                           hypothetical prote
histone H1-5 [vali
radA protein - Sul
DNA repair protein
hypothetical prote
chloride channel C
                                                                                                                                                                                       hypothetical prote
protein F20B17.12
                                                                                                                                                                                                                                                                                     Description
                                                                                                                                                                                                                                     probable cytochrom
                                                                                                                                                                                                                                                                hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cell updates/sec
                                                               hypothetical prote RW1 protein - mous
                                                                                                                                                                      choline O-acetyltr
protein P97 - Myco
                                                                                                                                                                                                           outer membrane
                                                                                                                                                                                                                    hypothetical
                                                                                                                                                                                                                             protein F15K9.3
                                                                                                                                                                                                                                                         hypothetical
                                                         probable Pto kinas
                                                                                    nypothetical
                                                                                                                                                 probable ubiquitin
                                                                                                                                                           ypothetical prote
                                                                                    prote
                                                                                                                                                                                                           pro
```

## ALIGNMENTS

R;Lamerdin, J.E.; McCready, P.M.; Skowronski, E.; Adamson, A.W.; Burkhart-Schultz, K.; Grgescu, A.; Avila, J.; Liu, S.; Bruce, R.; Quan, G.; Montgomery, M.; Ow, D.; Nolan, M.; submitted to the EMBL Data Library, January 1998
A;Description: Sequence analysis of a 3.5 Mb contig in 19p13.3 between CDC34 and D198342
A;Reference number: Z14195
A;Accession: T00636

A;Status: preliminary; translated from GB/EMBL/DDBJ

hypothetical protein F21856 2 - human
(;Species: Homo sapiens (man)
(;Species: Homo sapiens (man)
(;Date: 01-Feb-199) #sequence\_revision 01-Feb-1999 #text\_change 09-Jul-2004
(;Date: 01-Feb-199) #sequence\_revision 01-Feb-1999 #text\_change 09-Jul-2004
(;Accession: T00636

RESULT 1

```
hypothetical protein DKFZp762K222.1 - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 20-Oct-2000 #sequence_revision 20-Oct-2000 #text_change 09-Jul-2004
C;Accession: T51887
                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Map position: 19p13.3
A;Introns: 594/1; 637/3; 650/3
A;Note: F21856_2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: DNA
A; Residues: 1-679 < LAM>
A; Cross-references: UNIPROT: Q8IVT2; UNIPARC: UPI00000745CD; EMBL: AC004030; NID: g2804590;
                                                     A; Note: DKFZp762K222.1
                                                                                                                                                                                                                                                                                                                                                                             Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 36; Conservative C
Query Match
Best Local Similarity
Matches 12; Conserv
                                                                                                                                                                                                                                                                                                                        465
                                                                                                                                                                                                                                                                                                                                              1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                          MSPRHLSESSGKPLSTKOEASKPPRGCPQANRGVVR 500
 Conservative
                29.1%;
                                                                                                                                                                                                                                                                                                                                                                                 0
 <u>ت</u>
                Score 55;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                              Score 189; DB 2;
Pred. No. 1.4e-15;
); Mismatches 0;
 Mismatches
                 16;
                             DB 2;
                                                                                                                                                                                                                                                                                                                                                                                 0,
                              Length 218;
                                                                                                                                                                                                                                                                                                                                                                                                             Length 679;
                                                                                                                                                                                                                                                                                                                                                                                    Indels
    Indels
                                                                                                                                                                                                                                                                                                                                                                                    0
    <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                  Gaps
    Gaps
     0
                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
highly charged protein - human
C;Species: Homo sapiens (man)
C;Species: 1-Nov-1996 #sequence_revision 01-Nov-1996 #text_change 09-Jul-2004
C;Accession: 137273; $19884
C;Accession: 137273; $19884
R;Wilton, A.N.; Zehavi-Feferman, T.; Fleming, J.; Baker, E.; Chen, L.Z.; Cooper,
Cytogenet. Cell Genet. 58, 1985, 1991
A;Title: A unique intronless gene or gene seqment on chromosome 13 specifying a h
protein F15K9.3 [imported] - Arabidopsis thaliana C;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 C;Accession: D86165
                                                                                                           RESULT 5
D86165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Map position: 2
C;Superfamily: human cytochrome P450 CYP2D6; cytochrome P450 homology
C;Keywords: heme; iron; metalloprotein
C;Keywords: heme; iron (Cys) (axial ligand) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R;Lin, X.; Kaul, S.; Rounsley, S.D.; Shea, T.P.; Benito, M.I.; Town, C.D.; Fujii, C.Y.; M.; Koo, H.; Moffat, K.S.; Cronin, L.A.; Shen, M.; VanAken, S.B.; Umayam, L.; Tallon, L. euss, D.; Nierman, W.C.; Mitte, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, Nature 402, 761-768, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     probable cytochrome P450 [imported] - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 02-Feb-2001 #sequence_revision 02-Feb-2001 #text_change 09-Jul-2004
                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-315 <ARES>
A;Cross-references: UNIPROT:Q14109; UNIPARC:UPI0000179D14; EMBL:X59131; NID:g30387; PID:A;Note: submitted to the EMBL Data Library, April 1991
A;Note: submitted to the EMBL Data Library, April 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
A; Residues: 1-518 <STO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Title: Sequence and analysis of chromosome 2 of the plant Arabidopsis thaliana A;Reference number: A84420; MUID:20083487; PMID:10617197 A;Accession: B84514 A;Accession: B8514 A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Introns: #status absent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Reference number: I37273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Gene: At2g14100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: UNIPROT:Q9SI49; UNIPARC:UPI00000A96C6; GB:AE002093; NID:g4587680;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Accession: I37273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Accession: B84514
                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Map position: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Genetics:
                                                                                                                                                                                                                      179
                                                                                                                                                                                                                                                                        ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4 RHLSESSGKPLSTKQEASKPP----RGCPQANRGVV 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       φ
                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                     HLSESSGKPLSTKQEASKPPRGCPQAN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RFLASSRGKEEEREQELKYIPFGSGRRGCPGVNLGYI 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SSGKPLSTKQEASKPPRGCPQANRGV 34
                                                                                                                                                                                                                      HVSKKARKSASKPPPISKPPAGPPSSN 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SSREPVGHKEESPKGPGGGPAASGGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                  28.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28.8%; Score 54.5; 37.8%; Pred. No. 41;
                                                                                                                                                                                                                                                                                                                         ; Score 54; DB;
; Pred. No. 30;
4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2;
                                                                                                                                                                                                                                                                                                                                                                              2; Length 315;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15;
                                                                                                                                                                                                                                                                                                                            12;
                           #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 518;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  specifying a highly
                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IJ.
¥.
                                                 R;Murphy, T.F.; Kirkham, C.; Lesse, A....
Mol. Microbiol. 10, 87-97, 1993
Mol. Microbiol. 10, 87-97, 1993
A;Title: The major heat-modifiable outer membrane protein
A;Title: The major heat-modifiable outer membrane protein
                                                                                                                                                                                                                                                                           RESULT 7
S39866
                                                                                                                                                            C;Date: 19-Mar-1997 #sequence_revision 06-Jun-1997 #text_change C;Accession: S39866
                                                                                                                                                                                                                 outer membrane protein CD precursor - Moraxella catarrhalis C; Species: Moraxella catarrhalis
                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                 A;Reference number: S39866; MUID:95058186; A;Accession: S39866
                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
```

```
Chin, C.W.; Chung, M.K.; Conn, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, K.; ansen, N.F.; Hughes, B.; Hulzar, L. Nature 408, 816-820, 2010

A; Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C.C.; I.i., J.H.; I.i., Y.; Lin, S.X.; Liu, S.A.; Luros, J.S.; Maiti, R.; Marziali, Rizzo, M.; Rooney, T.; Rowley, D.; Sakano, H.

A; Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, I ker, M.; Wu, D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, R.W.

A; Title: Sequence and analysis of chromosome 1 of the plant Arabidopsis.

A; Reference number: A86141; MUID:21016719; PMID:11130712
                                                                                                                                                                                                                                                                                                              A;Cross-references: UNIPROT:O61826; UNIPARC:UPI000017B6FB; A;Experimental source: strain Bristol N2; clone B0511 C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Gene: F15K9.3
A;Map position: 1
C;Superfamily: Arabidopsis thaliana probable apoptosis inhibitor
                                                                                                                                                                                                  A;Map position: 1
A;Introns: 57/1; 118/3; 143/3; 176/3; 279/2; 336/3
F;135-181/Domain: BKBP-type peptidylprolyl isomerase homology <PPI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Tin-Wollam, A.; Sutterer, C.; Ozersky, P. submitted to the RMBL Data Library, May 1998 A;Description: The sequence of C. elegans cosmid B0511. A;Reference number: Z21285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Theologis, A.; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Alonso, Chin, C.W.; Chung, M.K.; Conn, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, K.; ansen, N.F.; Hughes, B.; Huizar, L.
                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
A; Residues: 1-360 <T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hypothetical protein B0511.1 - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 29-Oct_1999 #sequence_revision 29-Oct-1999 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: DNA
A; Residues: 1-823 < STO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Status: preliminary; translated from GB/EMBL/DDB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Accession: T33124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: UNIPROT:Q9ZVT8; UNIPARC:UPI000009ECD9; GB:AE005172; NID:g3850566; PII
                                                                                                                                                                                                                                                                                          A;Gene: CESP:B0511.1
                                                                                                   Query Match
Best Local Similarity
Matches 13; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 232 LGAESNPPKSSDPDNPKPPQSDPQSNR 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   σ
                                                 RHLSE-SSGKPLSTKQEASKPPRGCPQ 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LSESSGKPLSTKQEASKPPRGCPQANR 32
RHLEEMDNGGPLDIKIEKTFVPAKCPQ 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                         Conservative
                                                                                                                            28.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28.6%;
40.7%;
                                                                                                 ; Score 53.5;
; Pred. No. 39
2; Mismatche
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 54; DB:
Pred. No. 73;
4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
                                                                                                         Mismatches
                                                                                                                                     39;
                                                                                                                                                              BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ა
•
                                                                                                                                                        2;
                                                                                                         11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 823
                                                                                                                                                        Length
                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                           EMBL: AF067608; PIDN: AAC17657.3
                                                                                                         <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                         Gaps
                                                                                                         ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

B

is highly conserved

among

09-Jul-2004

```
protein F20B17.12 [imported] - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 31-Dec-2004
C;Accession: H96827
R;Theologis, A.; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.;
Chin, C.W.; Chung, M.K.; Conn, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dew
ansen, N.F.; Hughes, B.; Huizar, L.
Nature 408, 816-820, 2000
A;Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.;
A;Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Maiti, R.; Ma
Rizzo, M.; Rooney, T.; Rowley, D.; Sakano, H.
A;Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; T.
ker, M.; Wh. D.; Yu. G.; Fraser, C.M.; Venter, J.C.; Davis, R.W.
A;Title: Sequence and analysis of chromosome 1 of the plant Arabidopsis.
A;Reference number: A86141; MUID:21016719; PMID:11130712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Residues: 1-453 <MUR>
A;Cross-references: UNIPROT:Q08657; UNIPARC:UPI00000BB8DE; EMBL:L10755; NID:g149756; PID C;Keywords: membrane protein
F;1-26/Domain: signal sequence #status predicted <SIG>
F;27-453/Product: outer membrane protein CD #status predicted <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hypothetical protein Y57G11C.32 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 31-Dec-2004 C;Accession: T27242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R;McMurray, A.
                                                                                                                                                                           A; Molecule type: DNA
A; Residues: 1-308 <S'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        १
                                                                                                                                                                                                                                                  A;Accession: H96827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cross-references: UNIPROT:Q9U205; |
Experimental source: clone Y57GllC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Reference number:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Experimental source:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Residues: 1-268 <WIL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Statue:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Accession: T27242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               bmitted to the EMBL Data Library, September 1997
Reference number: 220330
                                                                                                                                                        Cross-references:
                                                                                                                                                                                                                      statue: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gene: CESP:Y57GllC.32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                             F20B17.12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             preliminary; translated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  70/3; 118/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N
                                                                                                                                                                           1-308 <STO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PDHLDACPGTPVNTVVD----PRGCPVQVN 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SPRHLSESSGKPLSTKQEASKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRHLSESSGKPLSTKQEASKPPRGCP-QAN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TPTPISENSGKSLSTAGSFENP 148
                                                                  floral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                          UNIPROT: Q9MA06; UNIPARC: UPI000009FF2E; GB: AE005173; NID: 97715603;
                                                                homeotic protein / AP2 domain transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28.0%;
38
38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         υ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 53;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 53.5;
Pred. No. 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C.J.; Pederspiel, N.A.; Kaul, S.; White, O.; Alonso Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UNIPARC: UPI0000082309; EMBL: 299281; PIDN: CAB54455.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GB/EMBL/DDBJ
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 268;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 453;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                            ₽.,
                                                                                                                                                                                                                                                                                                                                               н.,
                                                                                                                                                                                                                                                                                                                                                                                                                  E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2
                                                                                                                                                                                                                                                                                                                                                                                            Marziali
                                                                                                                                                                                                                                                                                                                                               Tallon,
                                                                                                                                                                                                                                                                                                                                                                                                                    Kim,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
```

```
A;Molecule type: protein
A;Molecule type: protein
A;Residues: 'XX',163-182;71-295;340-352;376-382;404-415;550-559;572-583;620-632;644-648
A;Residues: 'XX',163-182;71-295;340-352; UNIPARC:UPI0000175364; UNIPARC:UPI0000175365,
A;Cross-references: UNIPARC:UPI000017536B; UNIPARC:UPI000017536C; UNIPARC:UPI000017536B
R;Toussaint, J.L.; Geoffroy, V.; Schmitt, M.; Werner, A.; Garnier, J.M.; Simoni, P.; Ker Genomics 12, 412-416, 1992
A;Tritle: Human choline acetyltransferase (CHAT): partial gene sequence and potential cor A;Reference number: S24416; MUID:92155737; PMID:1339386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Title: A complementary DNA for human choline acetyltransferase induces A;Reference number: I52631; MUID:93180642; PMID:1337937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C; Accession: 152631; A60202; $24416;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N; Alternate names:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         choline O-acetyltransferase (EC 2.3.1.6) -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Brain Res.
A;Molecule type: mRNA
A;Residues: 111-119, 'T',121-260,'GQ',263-391,'A',393-395,'L',397-433,'G',435-528,'S',530
A;Residues: 111-119,'T',121-260,'GQ',263-391,'A',393-395,'L',397-433,'G',435-528,'S',530
A;RCOSS-references: UNIPARC:UPI000016B393; EMBL:845018; NID:9257109; PIDN:AAB23557.2; PIR;Misawa, H.; Matsuura, J.; Oda, Y.; Takahashi, R.; Deguchi, T.
R;Misawa, H.; Matsuura, J.; Oda, Y.; Takahashi, R.; Deguchi, T.
MOI. Brain Res. 44, 323-333, 1997
MOI. Brain Res. 44, 323-333, 1997
A;Title: Human choline acetyltransferase mRNAs with different 5'-region produce a 69-kD.
A;Reference number: PC4342; MUID:97225904; PMID:9073174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Title: Comparison of the promoter region of the human and A; Reference number: PH1571; MUID:93294599; PMID:8515278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: UNIPARC:UPI000016A6CB; EMBL:X56879; NID:g29940; R;Hersh, L.B.; Kong, C.F.; Sampson, C.; Mues, G.; Li, Y.P.; Fisher, J. Neurochem. 61, 306-314, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Description: Isolation and sub-chromosomal localization of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Cervini, R.; Rocchi, M.; DiDonato, S.; Finocchiaro, submitted to the EMBL Data Library, January 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Molecule type: DNA
A;Residues: 109-150,'Q',152-232 <TOU>
A;Cross-references: UNIPARC:UPI000016A6CA; EMBL:X56585;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Residues: 1-748 <RES>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Accession: I52631
                                                                                                                                                                                                                                                                                                                                                    A;Note: GenBank sequence g505335 (accession L33837) is R;Lorenzi, M.V.; Trinidad, A.C.; Zhang, R.; Strauss, W. DNA Cell Biol. 11, 593-603, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
A; Residues: 1-95 <HE2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
A; Residues: 688-738 < CER>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: mRNA
                                                                                                                                                                                                                      A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                           A; Accession: T01786
                                                                                                                                                                                                                                                                                          A; Reference number: Z14429;
                                                                                                                                                                                                                                                                                                 A; Title: Two mRNAs are transcribed from the human A; Reference number: Z14429; MUID:93000480; PMID:1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Status: translation not shown; translated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Accession: PH1571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Accession: S14483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Reference number: S14483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Title: Conservation of amino acid sequences between human and Reference number: A60202; MUID:89036242; PMID:3183663; Accession: A60202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;Cross-references: UNIPROT:P28329; UNIPARC:UPI0000161BC7; GB:S56138; NID:g301095;
;Hersh, L.B.; Takane, K.; Gylys, K.; Moomaw, C.; Slaughter, C.
.Neurochem. 51, 1843-1845, 1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Species: Homo sapiens (man)
Species: Homo sapiens (man)
Date: 10-Nov-1992 #sequence revision 13-Mar-1997 #text change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Experimental source: GB:L33837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cross-references: UNIPARC:UPI0000004CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Status: translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Accession: S24416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Y.; Nakanishi, I.; Deguchi, T.
Res. Mol. Brain Res. 16, 287-294,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SESSGKPLSTKQEASKPPRGCP----QANRGVVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SESASIALTSKRKKKSPPRNAPLQRSSPYRGVTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          choline acetylase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1992
                                                                                                                                                                                                                                                                                             e numan gene
PMID:1388731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                   for
                                                                                                                                                                                                                                                                                                                                                                                                                                     missing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NID:g29938;
                                                                                                                                                                                                                                                                                                                                          choline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     porcine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                     one nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 porcine choline acetyltr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PID:g29941
A.; Hilt,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        choline acetyltransf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PIDN: CAA39923.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PC4344;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         two
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           얁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         forms
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         D.; Baetge
                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         얁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PID:
                                                                                                                                                                                                                                                                                                                                                                                                                                            TBOG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P
```

```
protein P97 - Mycoplasma hyopneumoniae
C;Species: Mycoplasma hyopneumoniae
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 09-Jul-2004
C;Accession: T18353; T0806
C;Accession: T18353; T0806
R;Hsu, T.; Artiushin, S.; Minion, F.C.
J. Bacteriol, 179, 1317-1323, 1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: GDB:119775; OMIM:118490
A;Map position: 10g11.2-10g11.2
A;Introns: 129/3; 193/3
C;Superfamily: carnitine O-acetyltransferase
C;Keywords: acyltransferase; coenzyme A
밁
                                       Ś
                                                                                                                                                                                                                                                                                                                                                   Gene 214, 13-23, 1998
A;Title: Molecular analysis of the P97 cilium adhesin operon of Mycoplasma hyopneumoniae
A;Reference number: Z15097; MUID:98391007; PMID:9729120
A;Accession: T03805
A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   u. Bacteriol. 179, 1317-1323, 1997
A;Title: Cloning and functional analysis of the P97 swine cilium adhesin gene of Mycopl.
A;Reference number: Z18886; MUID:97175562; PMID:9023217
A;Accession: T18353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Heu,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Residues: 1-1108 <HSU>
A;Cross-references: UNIPROT:Q49542; UNIPARC:UPI00000AE988; EMBL:U50901; NID:g1399524; PI
R;H8u, T.; Minion, F.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Molecule type: mRNA
A;Residues: 119-152 <MI2>
A;Cross-references: UNIPARC:UPI0000000373; DDBJ:D82342; NID:g1906789; PIDN:BAA18946.1;
A;Experimental source: brain
                                                                                                                                                                                                                                                                                                       A; Molecule type: DNA
A; Residues: 1089-1108 <HS2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Gene: GDB:CHAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .;Residues: 119-152 <MI3>
.;Cross-references: UNIPARC:UPI0000000373; DDBJ:D82341; NID:g1906787; PIDN:BAA18945.1;
.;Experimental source: brain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;Residues: 119-167,'E',169-256 <MIS>
;Cross-references: UNIPARC:UPI000017536E; DDBJ:D82340
;Experimental source: brain
                                                                                                                                                                                                                                                             ;Experimental
                                                                                                                                                                                                                                                                                      ;Cross-references: UNIPARC:UPI000016E1AD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;Comment: This enzyme is responsible ;Comment: This enzyme is involved in ;Comment: This enzyme is involved in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Molecule type: mRNA
                                                                                                                                                                                                                                       Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Accession: PC4343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Accession: PC4344
                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Superfamily: carnitine O-acetyltransferase Keywords: acyltransferase; coenzyme A
                                                                                                                                                                                                                                                                                                                                                                                                                                                 T., Minion, F.O. 114. 13-23, 1998
                                                                                                                                                                                                              code:
                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LPPTESKPLATKEKATRPSQG 745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LSESSGKPLSTKQEASKPPRG 26
PEAAKPEAAKPVAAKPEAAKPVAAKPEAAKPV 868
                                            PRHLSESSGKPLSTKQEASKPPRGCPQANRGV 34
                                                                                                                                                                                                                                                          source:
                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                             strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28.0%;
42.9%;
                                                                                                                 28.0%;
                                                                                        Score 53; DB:
Pred. No. 1.3e
6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. 89;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            for the biosynthesis of the neurotransmitter acety
the synthesis of the neurotransmitter acetylcholis
the synthesis of the neurotransmitter acetylcholis
                                                                                                                                                                                                                                                                                 EMBL:AF012905; NID:g2654768; PIDN:AAC32526.1
                                                                                                                 1.3e+02;
                                                                                                                                         DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2
                                                                                           15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                         Length 1108;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 748;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                           Gaps
                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

RESULT 12

hypothetical RESULT

protein SCH24.19c

Streptomyces coelicolor

ဂ္ဂ

T36584

14

```
R;Lin, X.; Kaul, S.; Rounsley, S.D.; Shea, T.P.; Benito, M.I.; Town, C.D.; Fujii, C.Y.; N. M.; Koo, H.; Moffat, K.S.; Cronin, L.A.; Shen, M.; VanAken, S.E.; Umayam, L.; Tallon, L.c. euss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, J. Nature 402, 761-768, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Status. Fig. DA
A; Molecule type: DA
A; Residues: 1-1126 <WIL>
A; Cross-references: UNIPROT:Q19371; UNIPARC:UPI00000778EA; EMBL:Z73425; PIDN:CAA97788.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R;Kershaw, J.
submitted to the EMBL Data Library, May 1996
A;Reference number: Z19326
A;Accession: T20801
                                                                                                                                                                                                A;Map position: 2
A;Introns: 11/1; 22/1; 62/3; 106/2; 181/1; 260/3
C;Superfamily: Caenorhabditis elegans hypothetical protein F19B6.2b
                                                                                                                                                                                                                                                                                                                                                                                                                             A;Title: Sequence and analysis of chromosome 2 of the plant Arabidopsis thaliana A;Reference number: A84420; MUID:20083487; PMID:10617197 A;Accession: B84692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;Rounsley, S.D.; Lin, X.; Kaul, S.; Shea, T.P.; Fujii, C.Y.; Mason, T.M.; Shen, submitted to the EMBL Data Library, August 1998
A;Description: Arabidopsis thaliana chromosome II BAC T9I4 genomic sequence.
A;Reference number: Z14710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         probable ubiquitin fusion-degradation protein At2g29070 [imported] - Arabidopsis thalians
(;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 24-Mar-1999 #sequence_revision 24-Mar-1999 #text_change 09-Jul-2004
C;Accession: T02737; B84692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Map position: 4
A; Introns: 34/1; 90/1; 126/1; 441/3; 526/3; 604/1; 757/3; 1051/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hypothetical protein F12F6.6 - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 09-Jul-2004
  밁
                                                 Ś
                                                                                                                                                                                                                                                                                                                                                       A;Residues:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: UNIPROT:O81075; UNIPARC:UPI00000A4C4F; EMBL:AC005315; NID:g3461834; FA;Experimental source: cultivar Columbia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Status: preliminary; translated
                                                                                                                                                                                                                                                                                                                                                       A;Molecule type: DNA
A;Residues: 1-292 <STO>
                                                                                                                                                                                                                                                                                                                                                                                                   A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Residues: 1-292 < ROU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Status: translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Accession: T02737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Gene: CESP:F12F6.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C; Accession:
                                                                                                                                                                                                                                                                                                                                A;Cross-references: UNIPARC:UPI00000A4C4F; GB:AE002093; NID:g3461847; PIDN:AAC33233.1;
                                                                                                                                                                                                                                                                         Gene: At2g29070; T914.15
                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11;
                                                                                                l Similarity
13; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7 SESSGKPLSTKQEASKPPRGCPQANRG 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  T20801
                                                 PRHLSESSGKPLSTKQE---ASKPPRGCPQANRG 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SATPAGPLQAMQQAPAPTPGIPQMNQG
POKLTPSNKRPLOVKEEEEPASKVPKFTPFTGSG 201
                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                       27.8%;
38.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28.0%;
                                                                                                  6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                            Score 52.5;
Pred. No. 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 53;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 2;
                                                                                                                                                    DB 2;
                                                                                                  12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1126
                                                                                                                                                    Length 292;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                     Indels
                                                                                                  ŭ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                  ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ronr
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R;Oliver, K.; Harris, D.; James, K.D.; Parkhill, J.; Barrell, B.G.; Rajandream, M.A. submitted to the EMBL Data Library, May 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 histone H1-5 [validated] - human
N;Alternate names: histone H1.5; histone H1a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Cross-references: UNIPROT:Q9X8T3; UNIPARC:UPI0000DB068; EMBL:AL049826; PIDN:CAB42725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Reference number: Z21575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Residues: 1-197 <OLI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Species: Streptomyces coelicolor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Species: Homo sapiens (man)
|Date: 03-Mar-2000 #sequence_revision 03-Mar-2000 #text_change 09-Jul-2004
|Accession: S51660; JX0087; I59499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Accession: T36584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Title: Human spleen histone H1; isolation and amino acid sequences of three minor vari-
Reference number: JX0080; MUID:90130391; PMID:2613692
Accession: JX0087
     Matches
                                                                                                         2/Modified site:
                                                                                                                                                                                                                                                                                                            Gene: GDB:H1F5
Cross-references: GDB:6261922; OMIM:142711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Reference number: S51660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Albig, W.; Doenecke, D.
bmitted to the EMBL Data Library, December 1994
Description: A human histone gene cluster containing a complete
                                                                                                                                                                                                                                                                  Superfamily: histone Hl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Molecule type: protein
                                                                                                                                                                                    Keywords: acetylated amino end; chromosomal protein; DNA binding; nucleosome; nucleus
2-226/Product: histone H1-5 #status experimental <MAT>
2-37/Domain: amino-terminal <ATD>
                                                                                                                                                                                                                                                                                              Map position: 6p22.2-6p21.1
                                                                                                                                                                                                                                                                                                                                                                                                     Molecule type: DNA
Residues: 1-36,'1',38,'A',40-51,'P',53-58,'A' <CAR>
Cross-references: UNIPARC:UP100006CF66; GB:K02570; NID:g183746; PIDN:AAA35943.1; PID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Carozzi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cross-references: UNIPROT:P16401; UNIPARC:UPI0000001BDA; EMBL:X83509; NID:g603550; PI
Dhe, Y.; Hayashi, H.; Iwai, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Residues: 2-214,218-226 <OHE>
Residues: 2-214,218-226 <OHE>
ROSE-references: UNIPARC:UPI00014D4CF
ROSE-references: UNIPARC:UPI00014D4CF
ROSE-REFERENCE, N.; Marashi, F.; Plumb, M.; Zimmerman, S.; Zimmerman, A.; Coles, L.S.; Wells, Cence 224, 1115-1117, 1984
Reference 224, 1115-1117, 1984
Reference number: I59499; MUID:84196423; PMID:6719136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 lesidues: 1-226 <ALB>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ccession: 851660
                                                                                                                               )8-112/Domain: globular <GLB>
| 13-226/Domain: carboxyl-terminal <CTD>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ccession: I59499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tatus: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                lochem. 106, 844-857, 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      y Match 27.5%;
Local Similarity 42.9%;
hes 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SCOEDB:SCH24.19c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         preliminary; translated from GB/EMBL/DDBC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 PRHLSESSGKPLSTKQEASKPPRGCPQA 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRHAPISGGPPVTTQ----PPPQGNPFA 38
     Conservative
                                                                                                         acetylated amino end (Ser) (in mature form) #status experimental
                         27.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 52;
Pred. No. 3
Score 52; DB 1; Length 226; Pred. No. 39; 7; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4.
     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             set of histone genes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ۳
     0
```

S

PRHLSESSGKPLSTKQEASKPPRGCPQA 30

Db |: ::| || :| :|:|| |:|
Db 183 PKKATKSPAKPKAVKPKAAKPKA 210

Search completed: March 3, 2006, 13:36:31

Color and Agod Say

```
Regult
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ջ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
    Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
                                                                        558558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein search, using sw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-646-873-43
189
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        March
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2166443 seqs, 705528306 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2:
                                                                                                                                                                                                                                                                                                                                                                                                       100.0
82.0
52.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      UniProt_05.80:*
l: uniprot_sprot:*
2: uniprot_trembl:*
    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GenCore version 5.1.7 Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3, 2006, 13:19:17;
    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gapext 0.5
CSO21_PUMAN
CSO21_PONPY
CSO21_MOUSE
Q99KRO_MOUSE
Q8C911_MOUSE
Q8C911_MOUSE
Q8UB6_MOUSE
Q8UB6_MOUSE
Q8UB6_MOUSE
Q8UB6_MACFA
Q4P7A4_USTMA
Q4P7A4_USTMA
Q4P7A5_SDELT
Q5KG3_CAEBR
Q6CD11_MOUSE
Q6CD11_MOUSE
Q5CB5_MOUSE
Q5CB5_MOUSE
Q9ZP5_HUMAN
Q611M2_CAEBR
Q8CD11_MOUSE
Q9ZP5_MOUSE
Q9ZP5_MOUSE
Q9ZP6_SENTO
Q9MRW4_9ENTO
Q9MRW4_9ENTO
Q9MRW4_9ENTO
Q9JA74_9ENTO
Q9JA74_9ENTO
Q9JA74_9ENTO
Q9JA74_9ENTO
Q9JA74_PENTO
Q9JA74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Search time 13.7493 Seconds (without alignments)
1847.299 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2166443
                                                                                                                                                                                                                                                                                                                                                                                                      Q8ivt2
Q5rbh3
Q9d279
                                                                         Q9wrw4
Q9wry5
Q9ja74
Q9ja76
Q9ja89
Q80gi7
Q80gi6
Q6udm4
                                                                                                                                                                                                                                                                                                      Q9dbi1
Q6p747
Q4p7a4
                                                                                                                                                                                                                                                                                                                                                              Q99kr0
Q8c911
Q8bt17
                    Q6bk82
Q8n0m6
                                             Q4sc62
Q751d0
                                                                                                                                                                                                                   Q60kx3
Q8cdil
                                                                                                                                                                                                                                               Q9p2f5
Q611m2
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Description
                                                                                                                                                                                                                                                                           Q95k63
                                                                                                                                                                                                                                                                                        Q4nsh5
                                                                                                                                                                                                                                                                                                                                                Q8ve06
                                                                                                                                                                                                                                                                                                                                                                                          2 homo sapien
3 pongo pygma
9 mus musculu
0 mus musculu
                                                                                                   mus musculu
s mus musculu
human echov
    debaryomyce
ctenocephal
drosophila
                                             human echov
psittacid h
tetraodon n
oryza sativ
                                                                                                                                                                                                                                  homo sapien
caenorhabdi
caenorhabdi
                                                                                                                                                                                                                                                                                                                                   mus musculu
                                                                                                                                                                                                                                                                                                                                                               mus musculu
                                                                                                                                                                                                                                                                                                         ustilago ma
                                                                                                                                                                                                                                                                                                                    rattus norv
                                                                                                                                                                                                                                                                           anaeromyxob
macaca fasc
```

R R R R R	888	တ္တ မွ	띪	ΡŢ	ij.	Ä	Ħ	RESULT CS021																
NCBI (1)	Mamm	Home	Prot	13-6	13-6	QBIVT2;	CS021_	TT 1		45	44	43	42	41	4 0	ט ס ס	3 0	3 0	y (	5	34	ω ω	32	
TaxID	yota; lia;	Name=Clyorizi; Homo sapiens (Human)	Protein C19orf21	13-SEP-2005	13-SEP-2005	T2;	L HUMAN	AN		56	57	57	57	57	57	л. 77 с	n (	п t	л ( л (	57.5	58	58	5 8	
=9606; SEQUENCE	Metazoa; Eutheria;	8 (Hu	orf21	(Rel	(Rel	(89)	Ś			29.6	30.2	30.2				20.1				30.4	30.7	30.7	30.7	
NCE [LARGE		man).	•	. 48,	48	4	STANDARD;			242	3169	1228	684	488	291	187	1706	794	776	676	1294	1272	1257	
	cho	•		Last	Last	(rested)										N 1						N		
SCALE MRNA].	Craniata; Vertebri oglires; Primates;			annotation update)	sequence update)	8 <u>4</u>	PRT; 679 AA.		ALIGNMENTS	Q6QPA5_9ADEN	Q4KKT6_CANFA	Q4NNY0_9DELT	Q5B6Z8 EMENI	Q87W07_PSESM	O9EWV9 STRCO	OBSU36 ENCCU	DATE OF THE	OSSZTB CRYNR	OSKP49 CRYNE	PACC ASPFU	Q8IQIO_DROME	Q7KUI5_DROME	Q8IQH9 DROME	
	ata; &uteleoscomi Catarrhini; Hominidae;									Q6qpa5 simian aden		Q4nny0 anaeromyxob							_	Q4wy67 aspergillus	_			

```
RESOLUTION OF THE COLUMN OF TH
RESULT
CRESULT
ID 21
ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CS021 PONPY
Q5RBH3;
                            NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].

MEDLINB=22354683; PubMed=12466851; DOI=10.1038/nature01266;

Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo S.,

Nikaido I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa H.,

Yagi K., Tomaru Y., Hasegawa Y., Nogami A., Schonbach C., Gojobori T.,

Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J.,

Schriml L.M., Kanapin A., Matsuda H., Battalov S., Beisel K.W.,

Blake J.A., Bradt D., Brusic V., Chothia C., Corbani L.E., Cousins S.,

Dalla E., Dragani T.A., Fletcher C.F., Forrest A., Frazer K.S.,

Gassterland T., Gariboldi M., Gissi C., Godzik A., Gough J.,

Gassterland T., Gariboldi M., Gissi C., Godzik A., Gough J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CS021 MO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Euthoria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
Muroidea; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13-SEP-2005 (Rel. 48, Created)
13-SEP-2005 (Rel. 48, Last sequence update)
13-SEP-2005 (Rel. 48, Last annotation update)
Protein C19orf21 homolog.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This Swiss-Prot entry is copyright. It is produced through a continuous the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pongo pygmaeus (Orangutan).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COILED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Coiled coil.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The German cDNA consortium; Submitted (NOV-2004) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE=Kidney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13-SEP-2005 (Rel. 48, Created)
13-SEP-2005 (Rel. 48, Last seq
13-SEP-2005 (Rel. 48, Last ann
Protein C19orf21 homolog.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=9600;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AdNOd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CR858675; CAH90887.1; -; mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       long as its content is in no way modified and this statement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MSPRHLSESSGKPMSTKQEPWKLPRGSPQANRGVVR 506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 551
685 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
llarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ΑĄ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 575 P
; 75892 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          82.0%;
86.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
    Hirokawa N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 155; DB 1;
Pred. No. 8.6e-11;
1; Mismatches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Potential
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 189; DB 1;
Pred. No. 4.5e-15;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A3A99F4343396E81 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 685;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ne EMBL outstation restrictions on it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18 not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strausberg R.L., Peingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shemmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsleh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Richards S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.M.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.M.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Rachas S.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences.";
RL Proc. Natl. Agad. Sci. U S.A. 90.16899_16001/20021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WA Kanai A., Kawaji H., Kawasawa Y., Kedzierski R.M., King B.L.,

R Konagaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A.,

WA Maglott D.R., Maltais L., Marchlonni L., McKenzie L., Miki H.,

WA Nagashima T., Numata K., Okido T., Pavan W.J., Partea G., Pesole G.,

Petrovsky N., Pillai R., Pontius J.U., Qi D., Ramachandran S.,

WA Ravasi T., Reed J.C., Reed D.J., Reid J., Ring B.Z., Ringwald M.,

WA Sandelin A., Schneider C., Semple C.A., Secou M., Shinada K.,

WA Sultana R., Takenaka Y., Taylor M.S., Teasdale R.D., Tomita M.,

WA Sultana R., Takenaka Y., Taylor M.S., Teasdale R.D., Tomita M.,

WA Wilming L.G., Wynshaw-Boris A., Yanagisawa M., Yang I., Yang L.,

WA Yuan Z., Zavolan M., Zhu Y., Zimmer A., Carninci P., Hayatsu N.,

WA Yuan Z., Zavolan M., Zhu Y., Zimmer A., Carninci P., Hayatsu N.,

WA Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,

WA Hara A., Hashizume W., Imotani K., Ishii Y., Itoh M., Kagawa I.,

WA Miyazaki A., Sakai K., Sasaki D., Shibata K., Shinagawa A.,

Yasunishi A., Yoshino M., Waterston R., Lander E.S., Rogers J.,
                                                                                                                                       Matches
                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                           EMBL; AKO20266; BAB32049.1; -; mRNA.
EMBL; BC013508; AAH13508.1; -; mRNA.
Ensembl; ENSMUSGO0000035852; Mus musculus
MGI; MGI:1926156; 9130017N09Rik.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This Swiss-Prot entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EM the European Bioinformatics Institute. There are no restruce as long as its content is in no way modified and this successful the second content is in no way modified and this successful.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN-FVB/N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nature
                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Birney B., Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                  COILED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUCLEOTIDE SEQUENCE [LARGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Analysis of the mouse transcriptome based on 60,770 full-length cDNAs.";
   434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                   N
                                                                                                                                                                                                                                                                                                                                              CO11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               420:563-573 (2002) .
                                                                                                                                                                           Similarity
SPRHVSESSGRSLSSKQEWSKPPG--KATNVGVVR
                                                                SPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                                                                                                                           511
648 AA;
                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                           534 P
72281 MW;
                                                                                                                                                                52.9%;
65.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SCALE
                                                                                                                                       ω
--
                                                                                                                                                                   Score 100; DB 1;
Pred. No. 0.00068;
                                                                                                                                                                                                                                                                           Potential.
; 1E395B70763B3D1F CRC64;
                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MRNA].
       466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               functional annotation
                                                                                                                                                                                                       Length 648;
                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ne EMBL outstation restrictions on it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          statement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sato K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a collaboration
                                                                                                                                       2;
                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>.</u>
و:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   욙
                                                                                                                                       1.
```

RESULT 4
Q99KR0 MOUSE
ID Q99KR0, MOUSE PRELIMINARY;
AC Q99KR0;
DT 01-JUN-2001 (TremBLrel. 17,

Created)

PRT;

389 B 밁 S

```
RX MEDLINE=22388257; PubMed=12477932; DDI=10.1073/pnas.242603899; RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Stausberg R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M.; Hong L., RA Stapleton M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A., RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., RA Richards S., Mozny N., Sodergren B.J., Lu X., Gibbs R.A., RA Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A., RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., RA Rah Stapiene A.C., Grimwood J., Schein J.S., Sanchez R.M., Schein J.E., Jones S.J.M., Marra M.A.;

RA Blakesley R.W., Touchman J.W., Green B.D., Dickson M.C., RA Blakesley R.W., Touchman J.W., Green B.D., Dickson M.C., RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;

"Generation and initial analysis of more than 15,000 full-length human generation and initial analysis of more than 15,000 full-length human processing the state of the state
RESULT 5
Q8C911 MOUSE |
Q8C911 MOUSE |
AC Q8C911 |
DT 01-MAR-2003 ('
DT 01-MAR-2003 ('
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOT SOR REPRESENTATION OF THE PROPERTY OF THE 
                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Glires, Rodentia, Sciurognathi,
Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     688888
688888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hplbp3 protein
Name=Hplbp3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JUN-2001 (TrEMBLrel. 17, 01-MAR-2004 (TrEMBLrel. 26,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Strausberg R.;
Submitted (FEB-2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUCLEOTIDE SEQUEN
STRAIN=Mix FVB/N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUCLEOTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS, PRO0624; HISTONEHS.
SMART; SM00526; H15; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE=Mammary tumor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chromosomal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GI; MGI:109369; Hplbp3.

GG; GO:0005694; C:chromosome; IEA.

GG:0000786; C:nucleosome; IEA.

GG:0005634; C:nucleosome; IEA.

GG:0005634; P:DNA binding; IEA.

GG:0006334; P:nucleosome assembly; II

nterPro; IPR05818; Histone_H1/H5.

nterPro; IPR05819; Histone H5.

nterPro; IPR05819; Histone; 3.

http://doi.org/10.1006/14.

http://doi.org/10.

http://doi.org/10.

http://doi.org/10.

http://doi.org/10.

http://doi.org/10.
                                                                                                                                                                                                                                                                                                               299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BC004053; AAH04053.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             P02259; 1HST
                                                                                                                                                                                                                                                                                                                                                                              7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                  SESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                               AKSOGKTASMKORGSKPARKVPAAORGKVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein.
       (TrEMBLrel. 23, (TrEMBLrel. 23,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              42815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                38.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WAP-TGF alpha model. 7 months old.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Last
Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -; mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL/GenBank/DDBJ databases
       Created)
Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                         2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 73; DB Pred. No. 0.98
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  95BF67EDF113D95C CRC64;
                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sequence update)
annotation update)
                                                                                                                          516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IEA.
                                                                                                                                                                                                                                                                                                               328
                                                                                                                          ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
           DEE REGERER REGER REGERER REGERER REGERER REGERER REGERER REGERER REGERER REGE
```

```
RC STRAIN-CS7BL/GG; TISSUE-Cerebellum;

RX MEDLINE-21085660; PubMeda-11217851; DOI=10.1038/35055500;

RX KAWAI J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,

RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Adachi J., Fukuda S.,

RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,

RA Arakawa T., Hara A., Fukunishi Y., Konno H., Kasukawa T., Saito R.,

RA Arakawa T., Hara A., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

RA Arakawa T., Hara A., Ashburner M., Batalov S., Casavant T.,

RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Coasavant T.,

RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Baldarelli R., Barsh G.,

RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,

RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L.,

RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,

RA Blake J., Boffelli D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,

RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,

RA Lyons P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,

RA Suzuki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,

RA Suzuki H., Sato K., Wang K.H., Weitz C., Whittaker C., Wilming L.,

RA Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
sequencing Genome Res. [6]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euti
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
Muroidea; Muridae; Murinae; Mus.
                               STRAIN-C57BL/6J; TISSUB=Cerebellum;

MEDLINE=20530913, PubMed=11076861; DOI=10.1101/gr.152600;

Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.

Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M.,

Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,

Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,

Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,

Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.,

"RIKEN integrated sequence analyssis (RISA) system-184-format
sequencing pipeline with 384 multicapillary sequencer.";

Genome Res. 10:1757-1771(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus 7 days neonate cerebellum CDMA, KIKEN TULI-LER enriched library, clone:A730077D13 product:heterochromatin binding protein 3, full insert sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=C57BL/6J; TISSUE=Cerebellum;
MEDLINE=99279253; PubMed=10349636;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Name=Hp1bp3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100; Carninci P., Shibata Y., Hayateu N., Sugahara Y., Shibata K., Konno H., Okazaki Y., Muramateu M., Hayashizaki Y., Konno H., Okazaki Y., Muramateu M., Hayashizaki Y., Wuramatization of cap-trapper-selected cDNAs trappare full-length cDNA libraries for rapid discovery of new
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=C57BL/6J; TISSUE=Cerebellum;
The FANTOM Consortium,
the RIKEN Genome Exploration Research Group
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Meth. Enzymol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Carninci P., Hayashizaki Y.;
"High-efficiency full-length cDNA cloning.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAR-2004 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Analysis of the mouse transcriptome 60,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=C57BL/6J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUCLECTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ional annotation of 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Res.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          full-length cDNA librar
Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           days neonate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            303:19-44(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE=Cerebellum;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=Cerebellum;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26, Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a full-length mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last annotation update) cerebellum cDNA, RIKEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOI=10.1016/S0076-6879(99)03004-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   based
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                p Phase I & II
on functional
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Euteleostomi;
tia; Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                          Carninci P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Team;
annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   n K.-F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 genes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Itoh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3
```

```
멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P.,
A Rukuda S., Furuno M., Hanagaki T., Hara A., Hashizume W.,
A Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Hirozane T.,
A Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,
A Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S.,
A Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M.,
A Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M.,
A Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H.,
A Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H.,
A Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,
A Tagawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,
A Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.;
LI Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
C NESED: AKO43260; BAC31507.1; -; mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ensembl; ENSWIGGOOOOO28759; Mus musculus.
Ensembl; MGI:109369; Hplbp3.
GO: GO:0005694; C:Chromosome; IEA.
GO: GO:0000786; C:nucleosome; IEA.
GO: GO:0000786; C:nucleosome; IEA.
GO: GO:0005634; C:nucleosome assembly; IEA.
GO: GO:0005677; F:NNA binding; IEA.
GO: GO:0005677; F:NNA binding; IEA.
GO: GO:0005819; P:Nucleosome assembly; IEA.
InterPro; IPRO05819; Histone_H1/H5.
InterPro; IPRO05819; Histone_H5.
InterPro; IPRO11991; Wing hlx_DNA_bd.
Pfam; PP00538; Linker histone; 3.
PRINTS; SMO0526; H15; 3.
SMART; SMO0526; H15; 3.
Arakawa T., naza
Aizawa K., Izawa M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HSSP; P02
Ensembl;
MGI; MGI:
G0; G0:00
G0; G0:00
G0; G0:00
G0; G0:00
                                                                                                                                                                                                                                                                                                                                                         01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Mus musculus 10 days embryo whole body cDNA, RIKEN full-length
enriched library, clone:2610024J01 product:heterochromatin prot
binding protein 3, full insert sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                QBBT17 MOUSE
QBBT17;
      STRAIN-C57BL/6J; TISSUE-Whole body;
MEDLINE-21085660; PubMed=11217851; DOI=10.1038/35055500;
Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii
Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda
Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka
Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito
                                                                                                                                                                           STRAIN=C57BL/6J; TISSUE=Whole body; MEDLINE=99279253; PubMed=10349636; Carninci P., Hayashizaki Y.;
                                                                                                                                           "High-efficiency full-length cDNA cloning.";
Meth. Enzymol. 303:19-44(1999).
                                                                                                                                                                                                                            NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                            Mammalia; Eutheria; Euarchon
Muroidea; Muridae; Murinae;
                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurogna
                                                                                                                                                                                                                                                                                                                                               pinding protein
Name=Hplbp3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=C57BL/6J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOUSE
                                                                                                                                                                                                                                                                                                                                 musculus (Mouse)
                                                                                                                                                                                                                                                                TaxID=10090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P02259; 1HST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AKSQGKTASMKQRGSKPARKVPAAQRGKVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         516
                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein; Nuclear protein.
516 AA; 56841 MW; 95FCF9348F2868BE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE=Cerebellum;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  38.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2;
                                                                                                                                                                                                                                                                                Mug
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 73; DB:
Pred. No. 1.3;
2; Mismatches
                                                                                                                                                                                            DOI=10.1016/S0076-6879(99)03004-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1.3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 516;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
          ₽ H S K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P.,
Fukuda S., Furuno M., Hanagaki T., Hara A., Hashizume W.,
A Hayashida K., Hayateu N., Hiramoto K., Hiraoka T., Hirozane T.,
A Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,
A Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S.,
Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M.,
A Nishi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Okazaki Y.,
A Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H.,
Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,
A Tagawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,
A Tomaru A., Toya T., Yasunishi A., Muramateu M., Hayashizaki Y.;
Submitted (JUL-2001) to the BMEL/GenBank/DDBJ databases.
-!- SUBCELLULAR LOCATION: Nuclear (By similarity).
Ensembl; Enserver MGI; MGI:109369; Hplbp3.

MGI; MGI:109369; C:chromosome; IEA.
GO; GO:0005694; C:nucleosome; IEA.
GO; GO:0005634; C:nucleus; IEA.
GO; GO:0003677; F:DNA binding; IEA.
2 GO; GO:0006334; P:nucleosome assembly; IEA.
3 GO; GO:0006334; P:nucleosome assembly; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=C57BL/6J; TISSUE=Whole body;

MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600;

MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600;

Shibata K., Itch M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,

Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itch M.,

Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,

Yamamoto R., Matsumoto H., Sakura S., Kiegami T., Kashiwagi K.,

Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,

Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;

"RIKEN integrated sequence analysis (Risa A., Hayashizaki Y.;

"RIKEN integrated sequence analysis (Risa A.) system-384-format

sequencing pipeline with 394 multicapillary sequencer.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,
Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
Schriml I.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
Nordone P., King B., Ringwald M., Rodriguez I., Sakamoto N.,
Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
Sasaki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
Hayashiyaki Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN-C57BL/6J; TISSUE-Whole body;
MEDLINE-20499374; PubMed=11042159; DOI=10.1101/gr.145100;
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata Konno H., Okazaki Y., Muramatsu M., Hayatsuki Y.;
Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
"Normalization and subbraction of cap-trapper-selected cDN prepare full-length cDNA libraries for rapid discovery of Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nature
[4]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hayashizaki Y.; "Functional annotation of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUCLEOTIDE SEQUENCE
STRAIN=C57BL/6J; TIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The PANTOM Consortium,
the RIKEN Genome Exploration Research
"Analysis of the mouse transcriptome l
60,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN=C57BL/6J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nature
                                                                                                                                                                                       EMBL; AK028181; BAC
HSSP; P02259; 1HST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=C57BL/6J; TISSUE=Whole body;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     K., Matsuda H.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE=Whole
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ashburner M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          full-length mouse cDNA collection.";
                                                                                                                                                                   Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   body;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      h Group
based o
                                      IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Batalov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      p Phase
on func
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hase I & II
functional
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Casavant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of nev
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Carninci P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Team;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          new
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .≍
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Itoh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     genes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
Σ
                                                                                                                                                                                                                                                                                                                         Ξ
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           o
f
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SARRER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WEDLINE-2238855; Pubmed=12477922; DOI=10.1073/pnas.242603899;

WARDLINE-2238855; Pubmed=12477922; DOI=10.1073/pnas.242603899;

WARDLINE-2238855; Pubmed=12477932; DOI=10.1073/pnas.242603899;

WARDLINE-2238855; Pubmed=12477932; DOI=10.1073/pnas.242603899;

WARDLINE-2238855; Pubmed=124, Grouse L. H., Derge J.G., Schuler G.D.,

WARDLINE-2238855; Pubmed=124, Grouse L. H., Schaefer C.M., Schuler G.D.,

WARDLINE-2238855; Pubmed=124, Wagner L. H., Schuler G.M., Hong L.,

WARDLINE-2238855; Pubmed=124, Robert T. B., Schuler T. B., Solare M.F., Casavant T. L., Scheetz T. B.,

WARDLINE-2238855; Pubmed=124, Robert T. B., Robert T. B.,

WARDLINE-2238855; Pubmed=124, Robert T. B., Waller T. B., Robert T. B.,

WARDLINE-2238855; Pubmed=124, Robert T. B., Waller T. B.,

WARDLINE-2238855; Pubmed=124, Robert T. B.,

WARDLINE-228855; Pubmed=124, Robert T. B.,

WARRELINE-228855; Pubmed=124, Robert T. B.,

WARRELINE-28855; Pubmed=124, Robert T. B.,

WARRELINE-22885; Pubmed=124, Rob
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
MGI; MGI:109369; Hplbp3.

GO; GO:0005694; C:chromosome; IEA.
GO; GO:0000786; C:nucleosome; IEA.
GO; GO:0005634; C:nucleosome; IEA.
GO; GO:0005634; C:nucleosome assembly; IEA.
GO; GO:0003677; F:DNA binding; IEA.
GO; GO:0005633; P:nucleosome assembly; IEA.
InterPro; IPR005818; Histone_H5.
InterPro; IPR005819; Histone_H5.
InterPro; IPR011991; Wing_hlx_DNA_bd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRINTS; PRO0624; HISTONEHS. SMART; SM00526; H15; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi; Muroidea; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAR-2002 (TrEMBLrel.
01-MAR-2004 (TrEMBLrel.
Heterochromatin protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QBVE06 MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR005819; Histone_H5.
InterPro; IPR011991; Wing_hlx_DNA_bd.
Pfam, PF00538; Linker_histone; 3.
                                                                                                                                                                                                                                                                                                         STRAIN-FVB/N; TISSUE-Mammary tumor. Director MGC Project; Submitted (DEC-2001) to the EMBL/Ge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN-FVB/N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUCLEOTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Name=Hplbp3;
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                              NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                      "Generation and initial analysis of more than and mouse cDNA sequences."; Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOUSE
                                                                                                                                                                                                                                                                                   SUBCELLULAR LOCATION:
                                                                                                                                                                                                                                      BC020024; AAH20024.1; -; mRNA.
P02259; 1HST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7 SESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AKSQGKTASMKQRGSKPARKVPAAQRGKVR
                                                                                                                                                                                                                   ENSMUSG00000028759; Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0526; H15; 3.
| protein; Nuclear protein.
| 553 AA; 60738 MW; BA903BF37792223A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE-Mammary tumor. C3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      38.6%;
53.3%;
                                                                                                                                                                                                                                                                                   to the EMBL/GenBank/DDBJ databases TION: Nuclear (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20, Created)
20, Last sequence update)
26, Last annotation updat
1, binding protein 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 73; DB
Pred. No. 1.4;
                                                                                                                                                                                                                                                                                                                                                                                                                             99:16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                           <u>ე</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15,000 full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 553;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
QDBII MOUSE
ID QDBII MA
AC QBBII MA
AC QBBII MA
AC QBBII MA
AC QBII MA
AC QBII MA
AC QBII MA
AC ACACA
ACACAA
ACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RA Kawai J. Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y., RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S., Ra Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I., Ra Asitor T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R., Ra Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T., Ra Kuchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J., Rochima L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T., Ra Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T., Ra Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G., Ra Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F., Ra Sakai K., Okido T., Fletcher C., Pujita M., Jariboldi M., Ra Sakai H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., Ra Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., Sakai H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L., Washima-Joris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         library, c
protein 3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Mus musculus adult male liver cDNA, RIKEN full-length enriched
library, clone:1300008A17 product:heterochromatin protein 2, b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS; PR00624; HIS; SMART; SM00526; H15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF00538; Linker histone; PRINTS; PR00624; HISTONEH5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=C57BL/6J; TISSUE=Liver;
MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
Carninci P., Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus (Mouse).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Buarchontoglires; Glires; Rodentia; Sciurogna
Muroidea; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chromosomal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Carninci P., Hayashizaki Y.;
"High-efficiency full-length
     STRAIN=C57BL/6J; TISSUE=Liver;
                                                                                the RIKEN Genome Exploration Research Group "Analysis of the mouse transcriptome based o 60,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                             The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                             Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=C57BL/6J; TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Name=Hp1bp3;
                                                                                                                                                                                                                                                      NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                          Nature 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                      "Functional annotation
                                  NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7 SESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AKSQGKTASMKQRGSKPARKVPAAQRGKVR 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 protein;
554 AA; 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            full insert sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        full-length cDNA cloning.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    38.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nuclear protein.
                                                                                                                                                                                                                                                                                                                                      of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Æ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 73;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                                                                                                                                      full-length mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BD77604FF7AE3259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Glires; Rodentia; Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>ب</u>
                                                                                                                                                  9
                                                                                                                                                                         Phase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12;
                                                                                                                                                  functional
                                                                                                                                                                                                                                                                                                                                         CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   , Itoh M., Ibana S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                         ξ,
                                                                                                                                                                                                                                                                                                                                         collection.";
                                                                                                                                                  annotation
                                                                                                                                                                           Team;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ç.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                      K. -F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                  ō,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
RESULT
Q6P747
ID Q6P747
AC Q6
DT 05
DT 05
DT 05
DT N8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          $\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\exititt{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\exititt{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\text{$\e
                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HSSP; P02259; 1HST:
Ensembl; ENSMUSGO000028759; Mus musculus MGI; MGI:109369; Hplbp3.
GO; GO:0005694; C:chromosome; IEA.
GO; GO:0000786; C:nucleosome; IEA.
GO; GO:0005634; C:nucleosome; IEA.
GO; GO:0005634; C:nucleosome assembly; IEA.
GO; GO:0005634; P:DNA binding; IEA.
GO; GO:0005634; P:DNA binding; IEA.
GO; GO:000537; F:DNA binding; IEA.
GO; GO:0005394; P:nucleosome assembly; IIE
InterPro; IPR005818; Histone H1/H5.
InterPro; IPR005818; Histone H5.
InterPro; IPR005819; Histone H5.
InterPro; IPR01991; Wing h1x DNA bd.
Pfams; PF00538; Linker histone; 3.
PRINTS; PR00526; H15; 3.
                                                                                         ULT 9
747 RAT PRELIMINARY;
Q6P747 RAT PRELIMINARY;
Q6P747;
05-UUL-2004 (TrembLrel. 27
05-UUL-2004 (Tremblrel. 27
05-UUL-2004 (Tremblrel. 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NOLLECTION SERVING.

STRAIN-CS7BL/63; TISSUE=Liver;

STRAIN-CS7BL/63; TISSUE=Liver;

Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,

Shibata K., Itoh M., Aizawa K., Kitsunai T., Tashiro H., Itoh M.,

Konno H., Akiyama J., Nishi K., Kitsunai T., Tsahiro H., Itoh M.,

Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,

Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,

Fujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Mateuura S., Kawai J.,

Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;

"RIKEN integrated sequence analysis (RISA) system-384-format

sequencing pipeline with 384 multicapillary sequencer.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               prepare
Genome R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Addchi J., Aizawa K., Akahira S., Akimura T., Arai A., Aono H.,
Arakawa T., Bono H., Carninci P., Fukuda S., Fukunishi Y., Furuno M.,
Hanagaki T., Hara A., Hayatsu N., Hiramoto K., Hiraoka T., Hori F.,
Imotani K., Ighii Y., Itoh M., Izawa M., Kasukawa T., Kato H.,
Kawai J., Kojima Y., Konno H., Kouda M., Koya S., Kurihara C.,
Matsuyama T., Miyazaki A., Nishi K., Nomura K., Numazaki R., Ohno M.,
Okazaki Y., Okido T., Owa C., Saito H., Saito R., Sakai C., Sakai K.,
Sano H., Sasaki D., Shibata K., Shibata Y., Shinagawa A., Shiraki T.,
Sogabe Y., Suzuki H., Tagami M., Tagawa A., Takahashi F., Tanaka T.,
Tejima Y., Toya T., Yamamura T., Yasunishi A., Yoshida K., Yoshino M.,
Miramatsu M., Hayashizaki Y.,
Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.
-I- SUBCELLULAR LOCATION: Nuclear (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M., Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.; "Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes."; Genome Res. 10:1617-1630(2000).
                                     Hypothetical p
Name=MGC72624;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=C57BL/6J; TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chromosomal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
                                                                                                                                                                                                                                                                                                                                                                                                        464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P02259; 1HST.
bl; ENSMUSG00000028759; Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AK004938; BAB23683.1; -; mRNA.
   norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           l Similarity
                                                                                                                                                                                                                                                                                                                                                                                                        AKSQGKTASMKQRGSKPARKVPAAQRGKVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SESSGKPLSTKOEASKPPRGCPOANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein; Nuclear protein.
554 AA; 60868 MW; 7BC6CA49F2F02F70 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10:1757-1771 (2000).
                                                                                                                                                                     (TrEMBLrel. 27,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                    protein MGC72624.
      (Rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38.6%;
                                                                                                   27,
27,
                                                                                                   Last sequence up
                                                                                                                                                                     Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 73; DB Pred. No. 1.4; 2; Mismatches
                                                                                                                                                                                                                                      PRT;
                                                                                                                                         sequence update)
                                                                                                                                                                                                                                      553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IEA.
                                                                                                                                                                                                                                                                                                                                                                                                        493
                                                                                                                                                                                                                                      B
                                                                                                   update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 554;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SQUERRE DE LA COMPANIA DEL COMPANIA DE LA COMPANIA DEL CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
```

```
RESULT 10
Q4P7A4 USTWA
ID Q4P7A4 USTWA
ID Q4P7A4;
AC Q4P7A4;
DT 13-SEP-2
DT 13-SEP-2
DT 13-SEP-2
DE Hypothet
GN ORFNames
OS Ustilago
OC Eukaryot
OC Ustilago
OC Ustilago
OC Ustilago
OC NCBI
RN [1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RA Strausberg R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E., RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., RA Pahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A., Willalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., RA Pahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A., RA Wilting M., Wadan A., Young A.C., Shevchenko Y., Bouffard G.G., RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A., Touchman J.W., Green E.D., Dickson M.C., Parad Mouse cDNA sequences.";

Paroc. Natl. Acad. Sci. U.S.A. 99:16999-16903 (2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local (
                                                                                                                                                                                               13-SEP-2005
13-SEP-2005
13-SEP-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Strausberg R.;
Submitted (NOV-2003) to the EMBL/GenBank/DDBJ databases.
Submitted (NOV-2003) to the EMBL/GenBank/DDBJ databases.
SUBCELLULAR LOCATION: Nuclear (By similarity).
EMBL; BC061837; AAH61837.1; -; mRNA.
Ensembl; ENSRNGG00000014445; Rattus norvegicus.
RGD; 735099; MGC72624.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR005818; Histone_H1/H5.
InterPro; IPR005819; Histone_H5.
InterPro; IPR0015819; Histone_H5.
InterPro; IPR001591; Wing_hlx_DNA_bd.
Pfam; PF00538; Linker_histone; 3.
PRINTS; PR00624; HISTONEH5.
                          Ustilago maydis 52i.
Eukaryota; Fungi; Basidiomycota; Ust
Ustilaginomycetidae; Ustilaginales;
NCBI_TaxID=237631;
                                                                                                                                          Hypothetical protein.
ORFNames=UM04009.1;
                                                                                                                                                                                                                                                                                    Q4P7A4_USTMA
Q4P7A4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS; PR00624; HIST
SMART; SM00526; H15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GG; GO:0000786; C:nucleosome; IEA.
GO; GO:0005634; C:nucleus; IEA.
GO; GO:0003677; F:DNA binding; IEA.
GO; GO:0006334; P:nucleosome assembly;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
Muroidea; Muridae; Murinae; Rattus.
NCBI TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chromosomal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=Prostate;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                            462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                            AKPQGKTASMKQRGAKPARKVPAAQRGKVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   l protein;
553 AA; 6
                                                                                                                                                                                                  (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                          (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; Hypothetical protein; Nuclear protein 60807 MW; 1647A55B69ABEFEB CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                34.48;
                                                                                                                                                                                                  31,
31,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MW;
                                                                                                                                                                                                  Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                          Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 65; DB Pred. No. 14; 3; Mismatches
                                                          Ustilaginomycetes; es; Ustilaginaceae;
                                                                                                                                                                                                                                                                                                                    403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 36
                                                                                                                                                                                                                                                                                                                 ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
                                                                                                                                                                                                  update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 553;
                                                             Ustilago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
RESULT 11

Q4NSH5 9DELT

Q4NSH5 9

AC Q4NSH5;

DT 13-SEP-2

DT 13-SEP-2

DT 13-SEP-2

DT 13-SEP-2

OR PANAMEN

OR PANAMEN

OC CYSTODAX

ON NCBI_TAX

RN [1]

RP NUCLEOTI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RA Birren B., Nusbaum C., Abebe A., Abouelleil A., Adekoya E.,
RA Ait-zahra M., Allen N., Allen T., An P., Anderson M., Anderson S.,
RA Arachchi H., Armbruster J., Bachantsang P., Baldwin J., Barry A.,
RA Arachchi H., Armbruster J., Bloom T., Blye J., Boguslavskiy L.,
RA Bayul T., Blitebsteyn B., Bloom T., Blye J., Boguslavskiy L.,
RA Borowsky M., Boukhgalter B., Bloom T., Blye J., Calixte N.,
RA Calvo S., Camarata J., Campo K., Chang J., Cheshatsang Y., Citroen M.,
RA Colymore A., Considine T., Cook A., Cooke P., Corum B., Cuomo C.,
RA Colymore A., Considine T., Cook A., Cooke P., Corum B., Cuomo C.,
RA Erickson J., Foley K., Gage D., Galagan J., Gearin G., Gnerre S.,
RA Fitzgerald M., Foley K., Gage D., Galagan J., Gearin G., Gnerre S.,
RA Fitzgerald M., Foley K., Gage D., Galagan J., Gearin G., Gnerre S.,
RA Fitzgerald M., Foley K., Gage D., Galagan J., Gearin G., Gnerre S.,
RA Hagopian D., Hagos B., Hall J., Hatcher B., Heller A., Higgins H.,
RA Hagopian D., Hagos B., Hall J., Hatcher B., Heller A., Higgins H.,
RA Honan T., Horn A., Houde N., Hughes L., Hulme W., Husby B., Iliev I.,
RA Kalls C., Kieu A., Kismer P., Kodira C., Kulbokas E., Labutti K.,
RA Kalls C., Kieu A., Kismer P., Kodira C., Kulbokas E., Labutti K.,
RA Lama D., Landers T., Leger J., Levins S., Lewis D., Lewis T.,
RA Lui A., Ma L.J., Mabbitt R., Macdonald J., Maclean C., Major J.,
RA Medirov J., Mihalev A., Mihova T., Mikkelsen T., Menneus L.,
RA Medirov J., Mihalev A., Mihova T., Mikkelsen T., Menga V., Moru K.,
RA Morbu N., O'donnell P., Okoawo O., O'leary S., Omotosho B.,
RA Purcell S., Rachupka T., Ramasamy U., Rameau R., Ray V., Raymond C.,
RA Rutman M., Schupbach R., Seaman C., Settipali S., Sharpe T.,
RA Rutman M., Schupbach R., Seaman C., Stubbs M., Talamas J., Tchuinga P.,
RA Venkataraman V., Vinson J., Valee D., Vassiliev H.,
RA Venkataraman V., Vinson J., Valee C., Wang S., Wangchuk T.,
RA James D., Sharpe T., Topham K.,
RA James D., Sharpe T., Topham S., Yeas S., Yee S., Young G., Zainoun J., Zembeck L.,
RA James D., Sharpe T.,
                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 14
                                                                                                                                                 Q4NSH5;
13-SEP-2005
13-SEP-2005
13-SEP-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=521,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUCLEOTIDE SEQUENCE
                                                        Anaeromyxobacter dehalogenans 2CP-C.
Bacteria; Proteobacteria; Deltaproteobacteria; Myxococcalea;
Cystobacterineae; Myxococcaceae; Anaeromyxobacter.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hypothetical protein. SEQUENCE 403 AA; 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "The genome sequence of Ustilago maydis.";
Submitted (FEB-2004) to the EMBL/GenBank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an
                                                                                                              Hypothetical protein. ORFNames AdehDRAFT_18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Yang S., Yang X., reager S., Zimmer A., Zody M., Lander B.,
                                 NCBI_TaxID=290397;
   NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            preliminary data.
, AACP01000140; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL/GenBank/DDBJ whole
                                                                                                                                                                                                                                                                                                                         303
                                                                                                                                                                                                                         _9DELT PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                          w
                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                    PRHLSESSGKPLSTKQE-ASKPPRG
                                                                                                                                                (TrEMBLrel.
                                                                                                                                                 (TrEMBLrel. 31, (TrEMBLrel. 31, (TrEMBLrel. 31,
                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                  1840;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EAK85106.1; -; Genomic_DNA.
                                                                                                                                                                                                                                                                                                                                                                                                             34.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         43814 MW;
                                                                                                                                                 Created)
Last sequ
Last anno
                                                                                                                                                                                                                                                                                                                                                                                             Score 64.5; D. Pred. No. 12; 3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                               <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4C40A68EBBC28BE7 CRC64;
                                                                                                                                                   sequence up
                                                                                                                                                                                                                                                                                                                         327
                                                                                                                                                                                                                                                                                                                                                            26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 shotgun (WGS)
                                                                                                                                                                                                                             688
                                                                                                                                                 update)
on update)
                                                                                                                                                                                                                                                                                                                                                                                                                                      DB
                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 403;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rom an
entry which
                                                                                                                                                                                                                                                                                                                                                                                                 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hafez N.,
                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
```

```
RESULT 13
Q9P2F5 HUMAN
ID 29P2F5 H
AC Q9P2F5;
DT 01-OCT-2
DT 01-OCT-2
DE KIAA1392
                                                                                                                                                                                                                                                                                                                                                                                   RESULT 12
Q95K63 MACFA PRELIMINARY;
AC Q95K63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOR RELEASE REPORT OF THE REAL PROPERTY OF THE REAL
                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 15
                                                                                                                                                                                                                                                                                                                      Best
                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                          Query Match
                      01-OCT-2000
01-OCT-2000
01-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Sequencing of the draft genome assembly dehalogenans 2CP-C.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hypothetical
SEQUENCE 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    preliminary data.
EMBL; AAHD01000022; E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases -- -- CAUTION: The sequence shown here is derived from an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Larimer F., Land M.;
"Annotation of the d
dehalogenans 2CP-C."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (MAY-2005) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Copeland A., Lucas S., Lapidus A. Hammon N., Israni S., Pitluck S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=2CP-C;
US DOE Joint
                                                                                                                                                                                                                                                                                                                                                                                                                           libraries.";
Submitted (JUL-2001) to the
EMBL; AB066526; BAB62204.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Osada N., Hida M., Kusuda J., Tanuma R., Iseki K.,
Suzuki Y., Sugano S., Hashimoto K.;
"Isolation of full-length cDNA clones from macaque
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mammalia; Eutheria; Euarchontoglires; Pri
Cercopithecidae; Cercopithecinae; Macaca.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hypothetical protein.
Macaca fascicularis (Crab
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US DOB Joint Genome Institute (JGI-ORNL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN=2CP-C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUCLEOTIDE
                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; AB0665:
Hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rissum=Medulla oblongata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9541;
                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL/GenBank/DDBJ whole
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAUTION: The sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            114
                                                                                                                                                                                                                                                                                                  14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15;
                                                                                                                                                                                                                                       2 SPRHLSESSGKPLSTKQEASKPPRGCPQANRGV 34
                                                                                                         HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRR-SRSSGAPWTCSRTAATPPRG-PRSSRG 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRHLSESSGKPLSTKQEASKPPRGCPQANRG.
                                                                                                                                                                                                              SDRQVPHSSREPVGHKEESPKGPGGGPAASGGV 671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               al protein.
688 AA; 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (TrEMBLrel. 19,
1 (TrEMBLrel. 19,
3 (TrEMBLrel. 25,
                                                                                                                                                                                                                                                                                                                                                                                   11 protein.
926 AA; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                Conservative
                        (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genome Institute (JGI-PGF);
                                                               (TrEMBLrel.
                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      draft
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (Crab eating macaque) (Cynomolgus monkey)
Chordata; Craniata; Vertebrata; Euteleost
Buarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EAL78484.1; -; Genomic_DNA.
                                                                                                                                                                                                                                                                                                                                                                                   102534 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   75748 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    33.3%;
                                                                                                                                                                                                                                                                                                                      33.3%;
                        15,
22,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   genome
                                                                                                                                                                                                                                                                                                                                                                                                                             .:
                        Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                  6
                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 63; DB Pred. No. 33; 6; Mismatches
                                                                  Created)
                                                                                                                                                                                                                                                                                                                      Score 63;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A., Barry K., Detter C., Glavina
S., Richardson P.;
s assembly of Anaeromyxobacter
                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   251BA3B9B77E0C82 CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                      8FDA496C4CA1A00C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        assembly
                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     shotgun
                                                                                                              950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                            DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Iseki K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of Anaeromyxobacter
                                                                                                              ጅ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (WGS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                     databases
                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 688;
                                                                                                                                                                                                                                                                                                                                                                                      CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       entry which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hirai M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               brain
                                                                                                                                                                                                                                                                                                                                                926;
                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Terao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2
                                                                                                                                                                                                                                                                                                         0
```

```
RESULT 14
Q611M2 CAEER
ID Q611M2 CAEER
ID Q611M2 CAEER
AC Q611M2 CAEER
ID 25-OCT-2
DT 25-OCT-2
DT 25-OCT-2
DT 25-OCT-2
DT ASSOCIATION
CAECOLOTION
CAECOLOTION
CAECOLOTION
CAECOLOTION
REPORTATION
REPO
RESULT 15
Q60KX3 CAEBR
Q1D Q60KX3_CAEBR PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              preliminary data.

C EMBL; CAACO1000080; CAE70437.1; -; Genomic DNA.

R GO; GO:0000151; C:ubiquitin ligase complex; IEA.

R GO; GO:0004872; F:metal ion binding; IEA.

R GO; GO:0004842; F:ubiquitin-protein ligase activity; IEA.

R GO; GO:0008270; F:zinc ion binding; IEA.

R GO; GO:0016567; P:protein ubiquitination; IEA.

R GO; GO:0016567; P:protein ubiquitination; IEA.

R InterPro; IPR001841; Znf_RING.

R INCSITE; PS50089; ZF_RING_2; 1.

M Hypothetical protein; Metal-binding; Nuclear protein; Zinc; Zinc-finger.

SEQUENCE 732 AA; 84426 MW; F62612AB8A1BABA9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NON TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ramme-rosers (Republication of the Republication of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo варіелв (Human).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Name=CBG17014;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25-OCT-2004 (TrEMBLrel. 28, Cr
25-OCT-2004 (TrEMBLrel. 28, La
25-OCT-2004 (TrEMBLrel. 28, La
25-OCT-2004 (TrEMBLrel. 28, La
Hypothetical protein CBG17014.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q611M2_CAEBR
Q611M2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ensembl;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MRDLINE=20181126; PubMed=1071818;
Nagase T., Kikuno R., Ishikawa K.-I., Hirosawa M., Ohara O.;
"Prediction of the coding sequences of unidentified human genes. XVI
The complete sequences of 150 new cDNA clones from brain which code
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Name=KIAA1392;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     large proteins in vitro.";
Res. 7:65-73(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           663
                                                                                                                                                                                                               383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AB037813; BAA92630.1; -; mRNA.
bl; ENSG00000173320; Homo sapie
                                                                                                                                                                                                                                                                                4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 SPRHLSESSGKPLSTKQEASKPPRGCPQANRGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14;
                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SDRQVPHSSREPVGHKEESPKGPGGGPAASGGV
                                                                                                                                                                                                               RSTSESSSSPESEMPESSKESQSCPKCSR
                                                                                                                                                                                                                                                                                RHLSESSGKPLSTKQEASKPPRGCPQANR 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                950 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            33.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                105132 MW; 83D23F5081770689 CRC64;
                                                                                                                                                                                                                                                                                                                                                                             32.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                    4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 63;
Pred. No. 4
                                                                                                                                                                                                                                                                                                                                                                             Score 62;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens.
                                       PRT;
                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      732
                                       930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 46;
                                                                                                                                                                                                                                                                                                                                                                                        46;
                                                                                                                                                                                                               411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₿
                                       ₿
                                                                                                                                                                                                                                                                                                                                                                                                                        <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3<u>4</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2; Length 950;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13;
                                                                                                                                                                                                                                                                                                                                                    12;
                                                                                                                                                                                                                                                                                                                                                                                                                        Length 732;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         from an
entry which is
                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

time

0

```
Search
Job tim
                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                SON CONTRACTOR OF THE PROPERTY                                                                                                                                         맑
                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q60KX3;
25-OCT-2004
25-OCT-2004
25-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                  preliminary data.

EMBL; CAACOLO00197; CAE56229.1; -; Genomic_DNA.

GO; GO:00000151; C:ubiquitin ligase complex; IEA.

GO; GO:00046872; F:metal ion binding; IEA.

GO; GO:0004687; F:mbiquitin-protein ligase activity; IEA.

GO; GO:0008270; F:zinc ion binding; IEA.

GO; GO:0008270; F:zinc ion binding; IEA.

GO; GO:0016567; P:protein ubiquitination; IEA.

InterPro; IPRO01841; Znf RING.

PROSITE; PS50089; ZF RING 2; 1.

Hypothetical protein; Metal-binding; Nuclear protein; Zinc;

Zinc-finger.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Caenorhabditis briggsae.
Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea;
Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hypothetical protein Name=CBG23864;
                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The C.briggsae Sequencing Submitted (SEP-2003) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=6238;
completed: March
me : 15.7493 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C.briggae Sequencing Consortium,
mitted (SEP-2003) to the EMBL/GenBank/DDBJ databases.
CAUTION: The sequence shown here is derived from an
EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry w
                                                                                                                                            582
                                                                                                                                                                                                                                                                                    13;
                                                                                                                                                                                                              4
                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                            RSTSESSSSPESEMPESSKESQSCPKCSR
                                                                                                                                                                                                              RHLSESSGKPLSTKQEASKPPRGCPQANR 32
                                                                                                                                                                                                                                                                                                                                                                                                                            930 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TrEMBLrel. 28, Created)
(TrEMBLrel. 28, Last sequence update)
(TREMBLrel. 28, Last annotation update)
l protein CBG23864.
                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                            106885 MW;
                                 ω
                                                                                                                                                                                                                                                                                                                 32.8%;
                                 2006,
                                                                                                                                                                                                                                                                                    4; Mismatches
                                                                                                                                                                                                                                                                                                                     Score 62;
Pred. No.
                                 13:26:06
                                                                                                                                                                                                                                                                                                                                                                                                                                A557783EF3EA15EB CRC64;
                                                                                                                                                                                                                                                                                                                         60;
                                                                                                                                               610
                                                                                                                                                                                                                                                                                                                                                      BB
                                                                                                                                                                                                                                                                                                                                                          ν
•
                                                                                                                                                                                                                                                                                    12;
                                                                                                                                                                                                                                                                                                                                                      Length 930;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entry which
                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18
                                                                                                                                                                                                                                                                                    Gaps
```

Ý

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score
                                                                                                                                                                                                        52.5
52.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              54.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          March 3, 2006, 13:35:46; Search time 4.82799 Seconds (without alignments) 616.473 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-646-873-43
189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           572060 segs, 82675679 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Issued_Patents_AA:*

| (cgn2_6/ptodata/1/iaa/6_COMB.pep:*
| (cgn2_6/ptodata/1/iaa/6_COMB.pep:*
| (cgn2_6/ptodata/1/iaa/FCOMB.pep:*
| (cgn2_6/ptodata/1/iaa/FCOMB.pep:*
| (cgn2_6/ptodata/1/iaa/FCOMB.pep:*
| (cgn2_6/ptodata/1/iaa/FECOMB.pep:*
| (cgn2_6/ptodata/1/iaa/Backfiles1.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
330.7
200.7
200.7
200.7
200.7
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
200.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     453
1036
305
2248

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

2448

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밂
                                                                                         US-09-050-516-43
US-10-278-547-43
US-10-278-547-47
US-10-278-547-47
US-10-278-547-42
US-10-278-547-42
US-09-270-767-42674
US-09-270-767-4218
US-09-270-767-4218
US-09-270-767-4218
US-09-270-767-4228
US-09-270-767-4243
US-09-270-767-4243
US-09-270-767-4243
US-09-252-991A-22080
US-09-417-252-4
US-09-417-264-41
US-09-417-264-41
US-09-417-264-41
US-09-417-264-41
US-09-417-264-41
US-09-417-264-41
US-09-417-264-41
US-09-417-264-41
US-09-417-264-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               572060
                                                                                                    Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Description
                                     Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 43,
Sequence 43,
                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             e 43, Appl
e 43, Appl
e 47, Appl
e 47, Appl
e 42, Appl
e 42, Appl
e 42, Appl
e 57993, A
                                                                                                    555, App
59667, A
59667, A
62080, A
22080, App
455, App
455, App
455, App
455, App
28970, A
455, App
28970, A
41, Appl
21, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14218, A
17640, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12, App1
```

<b>4</b> 5	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28
51	51	51	51	51	51.5	51.5	51.5	51.5	51.5	51.5	51.5	51.5	52	52	52	52	52
27.0	27.0	27.0	27.0	27.0	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.5	27.5	27.5	27.5	27.5
474	474	399	279	254	713	713	713	713	713	713	713	713	416	226	226	222	222
8	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
US-09-433-353-11	US-08-729-416C-11	US-10-029-180-64	US-09-252-991A-18863	US-09-252-991A-26135	US-10-014-717-11	US-09-567-899-11	US-09-568-472-11	US-09-568-486-11	US-09-568-480-11	US-09-567-969-11	US-09-568-102-11	US-09-335-409-11	US-09-902-540-10136	US-09-417-264-32	US-09-041-889-32	US-09-417-264-3	US-08-837-058-3
Sequence 11, App1	Sequence 11, Appl	Sequence 64, Appl	1886	Sequence 26135, A	Sequence II, Appi	•	Sequence 11, Appl	Sequence 11, Appl	Sequence II, Appi	Sequence 11, App1		Sequence II, Appl	Sequence 10136, A	Sequence 32, Appl	,	<u>,</u>	ω

## ALIGNMENTS

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 2
US-10-278-547-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-050-516-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 43, Application US/10278547
Patent No. 6660834
GENERAL INFORMATION:
APPLICANT: BILLING-MEDEL, PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
                                                                                                             TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 43:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 36 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: 11
                                                                                                                                                                                 APPLICATION NUMBER: US/09/050,516
FILING DATE: <Unknown>
APPLICATION NUMBER: 08/028,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.Pl
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
TOPOLOGY: linear MOLECULE TYPE: No. 6660834e SEQUENCE DESCRIPTION: SEQ ID NO: 43:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           36; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
                                                  STRANDEDNESS: single
                                                                        LENGTH: 36 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Abbott Laboratories STREET: 100 Abbott Park Road
                                                                                                                                                                     TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COHEN, MAURICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       No. 6627414e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 189; DB 2;
Pred. No. 8.6e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                              6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-278-547-43
                                                                            US-09-050-516-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-050-516-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 47
Patent No. (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
            Matches
                                         Query Match
                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/828,855

FILING DATE: 31-MAR-1997

ATTORNEY AGENT INFORMATION:

NAME: Becker, Cheryl L.

REGISTRATION NUMBER: 35,441

REFERENCE/DOCKET NUMBER: 6065.US.Pl

TELECOMMUNICATION INFORMATION:

TELEPHONE: 847/935-1729
                                                                                                                                                                                            TELEX:
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: STROUPE, S
TITLE OF INVENTION: F
TITLE OF INVENTION: TITLE OF INVENTION: TITLE OF INVENTION: TITLE OF SEQUENCES:
                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 215 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: PastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                             MOLECULE TYPE: No. 6627414e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
Local Similarity 100.0%; Score 189; DB 2; Local Similarity 100.0%; Pred. No. 7.3e-19; hes 36; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
                                                                                                                                           TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                              TOPOLOGY:
                                                                                                                          STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                              TELEFAX: 847/938-2623
                                                                                                                                                           ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7, Application US/09050516 6627414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HOUGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
RUSSETT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COHEN, MAURICE COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RUSSELL, JOHN C.
STROUPE, STEPHEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BILLING-MEDEL, PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GRANADOS,
                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STEPHEN D.
REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 189; DB 2;
100.0%; Pred. No. 8.6e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EDWARD N.
                                                                                                                                                                                               47:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                         Length 215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
            Indels
            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
            Gaps
            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-278-547-47
밁
                               ई
                                                                                                                                                               US-10-278-547-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent No. 6660834
GENERAL INFORMATION:
                                                                              Query Match
Best Local Similarity
Matches 36; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 47,
                                                                                                                                                                                                                                                                                                     TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: BILLING-MEDEL, PATRICIA COMEN, MAURICE COLDITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                 NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEPAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OPERATING SYSTEM: DOS
SOFTWARE: FRANCISCO for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                     TOPOLOGY: linear MOLECULE TYPE: No. 6660834e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 49
                                                                                                                                                                                  SEQUENCE DESCRIPTION: SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/09/050,516
FILING DATE: «Unknown»
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
                           MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM Compatible
                                                                                                                                                                                                                                            STRANDEDNESS: single
                                                                                                                                                                                                                                                                   TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/10278547
                                                                                                                                                                                                                                                                                    LENGTH: 215 amino acids
                                                                              100.0%; Score 189; DB 2; ilarity 100.0%; Pred. No. 7.3e-19; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GORDON, JUGGRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KRATOCHVIL, JON D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EDWARD N.
                                                                                                                       Length 215;
                                                                                  0,
                                                                                     0
```

RESULT 5

US-10-278-547-42

Sequence 42, Applicati Patent No. 6660834 GENERAL INFORMATION:

Application US/10278547

APPLICANT:

BILLING-MEDEL, PATRICIA COHEN, MAURICE

```
US-09-050-516-42
                                                   밁
                                                                                 á
                                                                                                                                                                                      , MOLECULE TYPE: No. 6627414e US-09-050-516-42
RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Patent No.
                                                                                                                                    Query Match
Best Local S
                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 679 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/82:
PILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: ROBERTS-RAPP, LISA
APPLICANT: RUSSELL, JOHN C.
APPLICANT: STROUPE, STEPHEN D.
TITLE OF INVENTION: FRAGENTS AND METHODS USEFU
TITLE OF INVENTION: FOR DETECTING DISEASES OF
TITLE OF INVENTION: TRACT
NUMBER OF SEQUENCES: 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEPAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Becker, Cheryi
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY: USA
ZIP: 60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                        STRANDEDNESS:
TOPOLOGY: lir
                                                                                                                                                                                                                                                             TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42, Application US/09050516
5. 6627414
                                                 465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 500
                                                                                1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                      36;
                                                                                                                    h 100.0%; Score 189; DB 2; Similarity 100.0%; Pred. No. 2.9e-18; 36; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BILLING-MEDEL, PATRICIA
COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
                                                                                                                                                                                                                                                                           679 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KRATOCHVIL, JON D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HODGES, STEVEN C.
KLASS, MICHAEL R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HAYDEN, MARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IBM Compatible
                                                                                                                                                                                                                                            single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08/828,855
                                                                                                                                                                                                                                                                                                                                                                                                                      35,441
                                                                                                                                                                                                                                                                                                                                                                                                       6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    METHODS USEFUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       THE GASTROINTESTINAL
                                                                                                                                                          Length 679;
                                                                                                                          Indels '0;
                                                                                                                           0
```

```
US-09-270-767-57993
                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                   RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-278-547-42
                                    GENERAL INFORMATION:
APPLICANT: Homburger et al.
APPLICANT: Homburger et al.
TITLE OF INVENTION: Nucleic acids and proteins of Drosophila melanogaster
FILE REFERENCE: File Reference: 7326-094
CURRENT FILING DATE: 1999-03-17
CURRENT FILING DATE: 1999-03-17
NUMBER OF SEQ ID NOS: 62517
                                                                                                                                                                      Patent No. 6703491
GENERAR TOTAL
SOFTWARE: PatentIn Ver. 2.0 SEQ ID NO 57993
                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 42:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/09/050,516

PILING DATE: <Unknown>
APPLICATION NUMBER: 08/828,855

PILING DATE: 31-MAR-1997

ATTORNEY/AGENT INFORMATION:

NAME: Becker, Cheryl L.

REGISTRATION NUMBER: 35,441

REFERENCE/DOCKET NUMBER: 6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY: linear
MOLECULE TYPE: No. 6660834e
SEQUENCE DESCRIPTION: SEQ ID NO: 42:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION: TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF
                                                                                                                                                                                                                                                                                                               465
                                                                                                                                                                                                                                                                                                                                                                                              36;
                                                                                                                                                                                                                                                                                                                                                      1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                               MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/10/278,547 FILING DATE: 23-Oct-2002 CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Abbott Park
STATE: IL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 679 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                            100.0%; llarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KLASS, MICHAEL R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HODGES, STEVEN C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                              <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                               Score 189; DB 2;
Pred. No. 2.9e-18;
                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 679;
                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; LENGTH: 108
TYPE: PRT
; ORGANISM: Drosophila melanogaster
US-09-270-767-57993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 8
US-09-270-767-42674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                            US-09-686-583B-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-686-583B-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; OTHER INFORMATION: Xaa means any amino acid
US-09-270-767-42674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Homburger et al.

TITLE OF INVENTION: Nucleic acids and proteins of Drosophila melanogaster FILE REFERENCE: File Reference: 7326-094
CURRENT APPLICATION NUMBER: US/09/270,767
CURRENT FILING DATE: 1999-03-17
NUMBER OF SEQ ID NOS: 62517
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 42674
LENGTH: 374
                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 12, Application US/09686583B Patent No. 6576750 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent No. 6703491 GENERAL INFORMATION:
                                                                                                                                                                                            SEQ ID NO 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 42674, Application US/09270767 Patent No. 6703491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity
                                                                                                                                                                                                                                           TITLE OF INVENTION: FLEA PERITROPHIN NUCLEIC ACID MOLECULES, PROTEINS AND USES THEREOF FILE REPERENCE: FC-6-C2
CURRENT APPLICATION NUMBER: US/09/686,583B
CURRENT FILING DATE: 2000-10-11
PRIOR APPLICATION NUMBER: 09/543,668
PRIOR PILING DATE: 2000-04-07
PRIOR APPLICATION NUMBER: 60/128,704
PRIOR PILING DATE: 1999-04-09
                                                                                                                                                                                                             SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS: 68
                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Heska Corporation APPLICANT: Gaines, Patrick APPLICANT: Wisnewski, Nancy
                                                                                                                                        ORGANISM: Ctenocephalides felis
                                                                                                                                                            TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT ORGANISM: Drosophila melanogaster FEATURE:
                                                                                                                                                                              LENGTH: 453
                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Match 30.7%;
Local Similarity 48.3%;
tes 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             313 APTALSVSAGQPLATQQATG--PGGGPQA 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 SPRHLSESSGKPLSTKQEASKPPRGCPQA 30
SESSGKPLSTKQEASKPPRGCPQANRG 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SPRHLSESSGKPLSTKQEASKPPRGCPQA 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    aPTALSVSAGQPLATQQATG--PGGGPQA 73
                                                                                                                                                                                                                                                                                                                                                                                    Gaines, Patrick J.
Wisnewski, Nancy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30.7%;
                                                                    30.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5; Mismatches
                                                     <u>ت</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 58;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 58; DB 2;
Pred. No. 1.1;
                                                                      Score 58; I
                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                         DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 æ
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 108;
                                                                                        Length 453;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 374;
                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ۲.
                                                       0
```

밁

318 TEPSTKPTSTETPATKPPQEIPCKQQG:344

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
US-09-902-540-14218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; ORGANISM: Myxococcus xanthus US-09-902-540-14218
                                                                                                                                                                     밁
                                                                                                US-09-149-476-555
                                                                                                                                                                                                  ঠ
                                                                                                                   RESULT 12
                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 14218, Application US/09902540 Patent No. 6833447
                                                 Sequence 555, Application No. 6420526 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 17640
LENGTH: 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 14218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent No. 674713
                                                                                                                                                                                                                                                                                                         TYPE: PRT
ORGANISM: Candida albicans
.09-248-796A-17640
                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR FILING DATE: 1998-02-13
PRIOR APPLICATION NUMBER: US 60/096,409
PRIOR PRIOR DATE: 1998-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/902,540
CURRENT FILING DATE: 2001-07-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 2000-07-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/217,883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Goldman,
                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: US 60/074,725 PRIOR FILING DATE: 1998-02-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/09/248,796A CURRENT PILING DATE: 1999-02-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Keith Weinstock et al
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO CANDIDA ALBICAN
TITLE OF INVENTION: FOR DIAGNOSTICS AND THERAPEUTICS
                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS: 28208
APPLICANT: ROSEN Et al. TITLE OF INVENTION: 186 FILE REFERENCE: PZ002P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ITLE OF INVENTION: Myxococcus xanthus Genome Sequences and Uses Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ENGTH: 1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           581 APGHGAPLSGQP-STSDEASPPPGAAP 606
                                                                                                                                                                     144 RILSQSSGKPVSLRETVSKIYR----EQGIV 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17640, Application US/09248796A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 SPRHLSESSGKPLSTKQEASKPPRGCP 28
                                                                                                                                                                                                     4 RHLSESSGKPLSTKQEASKPPRGCPQANRGVV 35
                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hinkle, Gregory J. Slater, Steven C. Wiegand, Roger C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hinkle,
                                                                                 Application US/09149476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       38-10 (15849) B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000-07-10
                                                                                                                                                                                                                                                       28.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29.4%;
                Human Secreted proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 55.5;
Pred. No. 38;
                                                                                                                                                                                                                                                       Score 54.5;
Pred. No. 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                           DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ν
••
                                                                                                                                                                                                                                                                           2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10;
                                                                                                                                                                                                                                         7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 1036;
                                                                                                                                                                                                                                                                         Length 305;
                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ۲.
                                                                                                                                                                                                                                            <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                            Gaps
```

```
EARLIER
EARLIER
                                                                                                                                                 SARLIER
SARLIER
                 ARLIER
                                                                 MRLIER
                                                                                                                                                                                                   ARLIER
                                                                                                                                                                                                                      ARLIER
                                                                                                                                                                                                                                      ARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/09/149,476 FILING DATE: 1998-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-03-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/038,621
                                                                 APPLICATION NUMBER: 60/043,314
                                                                                             APPLICATION NUMBER: 60/043,568
                                                                                                                                                                     APPLICATION NUMBER: 60/047,601
                                                                                                                                                                                                   APPLICATION NUMBER: 60/047,632
                                                                                                                    FILING DATE:
                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                FILING DATE: 1997-05-23
                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                      PLICATION NUMBER: 60/047,596
                                                                                                                                                                                                                                                                                     PPLICATION NUMBER: 60/047,582
[LING DATE: 1997-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PPLICATION NUMBER: 60/047,618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PLICATION NUMBER: 60/047,597
LING DATE: 1997-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PLICATION NUMBER: PCT/US98/04493
                                                                                                                                                                                                                                                                                                                                        PLICATION NUMBER: 60/047,613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PLICATION NUMBER: 60/040,626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LING DATE: 1997-03-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PLICATION NUMBER: 60/040,333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PLICATION NUMBER: 60/040,162
                                                                                                                                                                                                                                      PLICATION NUMBER: 60/047,612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PLICATION NUMBER: 60/047,617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PLICATION NUMBER: 60/047,583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PLICATION NUMBER: 60/047,633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PLICATION NUMBER: 60/047,502
                                                 LING DATE: 1997-04-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ING DATE: 1997-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ING DATE: 1997-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATION NUMBER: 60/047,600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         [CATION NUMBER: 60/040,163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           [CATION NUMBER: 60/040,336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATION NUMBER: 60/040,334
                                                                                                                                                                                                                                                                                                                                                                          ON NUMBER: 60/047,598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ON NUMBER: 60/047,615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ON NUMBER: 60/047,592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER: 60/047,500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER: 60/047,581
                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER: 60/047,492
                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER:
NUMBER: 60/043,311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1997-03-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1997-03-07
                                                                                                                                                                                   1997-05-23
                                                                                                                                                                                                                      1997-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1997-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1997-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1997-03-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1997-03-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1997-03-07
                                                                                  1997-04-1
                                                                                                                    1997-04-1
                                                                                                                                                                                                                                                                                                                          1997-05-23
                                                                                                                                                                                                                                                                                                                                                            1997-05-23
                                                                                                                                                                                                                                                                                                                                                                                             1997-05-2
                                                                                                                                                                                                                                                                                                                                                                                                                               1997-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                            1997-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1997-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1997-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1997-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1997-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1997-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1997-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1997-03-07
                 1997-04-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1997-05-23
                                                                                                                                                                                                                                                       1997-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/047,503
                                 60/043,569
                                                                                                                                                                                                                                                                                                                                                                                                                                             60/047,587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/047,584
                                                                                                                                   60/043,580
```

```
EARLIER
                                                                                                                                                                                                       EARLIER
EARLIER
EARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
                                                                                                                                                                                                                                                        EARLIER
EARLIER
                                                                                                                                                                                                                                                                                        EARLIER
EARLIER
EARLIER
EARLIER
                                                                                                                                                                                                                                                                                                                                                                          EARLIER
EARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EARLIER
EARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EARLIER
EARLIER
EARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EARLIER
EARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EARLIER
                                                                                                                                                                                                                                                                                                                                                            EARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                           MARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ARLIER
                                                                                                                                                                                  ER APPLICATION NUMBER: 60/056,864
ER FILLING DATE: 1997-08-22
ER APPLICATION NUMBER: 60/056,631
ER FILLING DATE: 1997-08-22
ER APPLICATION NUMBER: 60/056,845
ER FILLING DATE: 1997-08-22
ER FILLING DATE: 1997-08-22
ER APPLICATION NUMBER: 60/056,892
ER APPLICATION NUMBER: 60/057,761
ER APPLICATION NUMBER: 60/057,761
                                                                                                                                                                                                                                                                                                                                     ER FILING DATE: 1997-08-22

ER APPLICATION NUMBER: 60/056,911

ER FILING DATE: 1997-08-22

ER APPLICATION NUMBER: 60/056,636

ER FILING DATE: 1997-08-22

ER APPLICATION NUMBER: 60/056,874

ER APPLICATION NUMBER: 60/056,974

ER FILING DATE: 1997-08-22

ER APPLICATION NUMBER: 60/056,910

ER FILING DATE: 1997-08-22
APPLICATION N
FILING DATE:
APPLICATION N
FILING DATE:
                                                                    APPLICATION FILING DATE:
                                                                                                   FILING DATE: 1997-05-23
APPLICATION NUMBER: 60/
FILING DATE: 1997-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/056,880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/056,888
FILING DATE: 1997-08-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/056,882
FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/056,637
FILING DATE: 1997-08-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/056,630
FILING DATE: 1997-08-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/056,893
FILING DATE: 1997-08-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/056,877
FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/056,889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1997-04-11
APPLICATION NUMBER: 60/048,974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/043,672
FILING DATE: 1997-04-11
                                                                                                                                                      FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/047,595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/056,872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/056,878 FILING DATE: 1997-08-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1997-06-06
APPLICATION NUMBER: 60/056,886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PILING DATE: 1997-04-11
APPLICATION NUMBER: 60/043,313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/056,894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/056,879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/056,662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/043,315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER: 60/056,903
: 1997-08-22
                                                  NUMBER: 60/047,585
                                                                                                                     NUMBER: 60/047,599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER: 60/043,312
                                                                                     NUMBER: 60/047,588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER: 60/043,669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER: 60/043,674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1997-08-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1997-04-
                                   1997-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1997-04-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1997-04-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1997-04-11
                                                                      1997-05-23
```

```
RESULT 13
US-09-252-991A-32256
                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                        ş
                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 12
Sequence 32256, Application US/09252991A
Patent No. 6551795

GENERAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS TITLE OF INVENTION: ARRUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-07-27
PRIOR FILING DATE: 1998-07-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EARLIER
EARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EARLIER
EARLIER
EARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EARLIER
EARLIER
EARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EARLIER
EARLIER
EARLIER
EARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EARLIER
EARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EARLIER
EARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EARLIER
EARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ER APPLICATION NUMBER: 60/056,875
ER FILING DATE: 1997-08-22
ER APPLICATION NUMBER: 60/056,862
ER FILING DATE: 1997-08-22
ER APPLICATION NUMBER: 60/056,887
ER FILING DATE: 1997-08-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R FILING DATE: 1997-08-22
R APPLICATION NUMBER: 60/056,876
R PILING DATE: 1997-08-22
R APPLICATION NUMBER: 60/056,881
R FILING DATE: 1997-08-22
R APPLICATION NUMBER: 60/056,909
R FILING DATE: 1997-08-22
R FILING DATE: 1997-08-22
                                                                                                                                                                                                                                                                                            359
                                                                                                                                                                                                                                                                                                                                                                                                                            R FILING DATE:
R APPLICATION N
R FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1997-06-06
APPLICATION NUMBER: 60/057,650
FILING DATE: 1997-09-05
APPLICATION NUMBER: 60/056,884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1997-04-11
APPLICATION NUMBER: 60/056,632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1997-05-23
APPLICATION NUMBER: 60/047,614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/056,908
FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/048,964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/056,664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/043,670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/047,501 FILING DATE: 1997-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/043,576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1997-05-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/047,594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1997-09-05
APPLICATION NUMBER: 60/049,610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1997-04-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: FILING DATE: 1997-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/047,593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/057,669
                                                                                                                                                                                                                                                                                                                            N
                                                                                                                                                                                                                                                                                                                                                         ch 28.8%;
l Similarity 42.9%;
12; Conservative
                                                                                                                                                                                                                                                                                                              SPRHLSESSGKPLSTKQEASKPPRGCPQ 29
                                                                                                                                                                                                                                                                                            APRHYXGSSGEEVGV-QEGDPSPQGXPQ 385
                                                                                                                                                                                                                                                                                                                                                                                                                             DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                             1997-10-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1997-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1997-06-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1997-08-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1997-04-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1997-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                             60/061,060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/043,578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/047,589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/047,590
                                                                                                                                                                                                                                                                                                                                                           4;
                                                                                                                                                                                                                                                                                                                                                           Score 54.5; D
Pred. No. 18;
4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                              몂
                                                                                                                                                                                                                                                                                                                                                                                            2
                                                                                                                                                                                                                                                                                                                                                                                            Length 424;
                                                                                                                                                                                                                                                                                                                                                             ۲.
                                                                                                                                                                                                                                                                                                                                                             ۲.
```

Job time : 5.99466 secs

```
RESULT 15
US-09-270-767-44243
; Sequence 44243, Application US/09270767
; Patent No. 6703491
; Patent No. 6703491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        হ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 14
US-09-270-767-59667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-32256
                                                                                                                                                 ; TYPE: PRT; ORANISM: Drosophila melanogaster; PEATURE: ; OTHER INFORMATION: Xaa means any amino acid US-09-270-767-44243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; ORGANISM: Drosophila melanogaster US-09-270-767-59667
 밁
                                 8
                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: Homburger et al.
APPLICANT: Homburger et al.
TITLE OF INVENTION: Mucleic acids and proteins of Drosophila melanogaster
FILE REFERENCE: File Reference: 7326-094
CURRENT APPLICATION NUMBER: US/09/270,767
CURRENT FILING DATE: 1999-03-17
NUMBER OF SEQ ID NOS: 62517
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 44243
LENGTH: 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 16; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 6251;
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 59667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS:
SEQ ID NO 32256
LENGTH: 736
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 31.1%;
                                                                      Query Match
Best Local Similarity
Matches 16; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 59667, Application US/09270767 Patent No. 6703491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Homburger et al.
TITLE OF INVENTION: Nucleic acids and proteins of Drosophila melanogaster
FILE REFERENCE: File Reference: 7326-094
CURRENT APPLICATION NUMBER: US/09/270,767
CURRENT FILING DATE: 1999-03-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  76 SPTPVSEDQPRPQAGRTRFETDDRSVATHQEAAAHRQGCPQRYPG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      45 RHRAEKAYKCDICSMPLATKODLSLHMRHHKNDRRYKCDKCNKGFVR 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14; Conservative
 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 SPRHLSESSGKP-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 RHLSESSGK-----PLSTKQEASKPPR-----GCPQANRGVVR 36
                                 4 RHLSESSGK-----PLSTKQEASKPPR-----GCPQANRGVVR 36
RHRAEKAYKCDICSMPLATKODLSLHMRHHKNDRRYKCDKCNKGFVR 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                          Conservative
                                                                                          28.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; Score 53.5; Di
; Pred. No. 49;
6; Mismatches
                                                                            6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 53; DB
Pred. No. 6.3;
                                                                                          Score 53; DB 2;
Pred. No. 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ---LSTKQEASKPPRGCPQANRG 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 2; Length 116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 2; Length 736;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11; Indels
                                                                            11; Indels 14;
                                                                                                             Length 248;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2
                                                                            2
```

Search completed: March 3, 2006, 13:38:52

Cocosa sucosa spod sign.

```
270466,
48907, A
1883, Ap
12, Appl
12, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 1
US-09-050-516-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 43, Applicate Patent No. US20010010 GENERAL INFORMATION:
                        CLASSIFICATION:
CRASH CATALOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: 08/828,85
PILING DATE: 31-MAR-197
PTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEPHAX: 847/938-2623
TELEX:
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                              ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTEG for Wind
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29
31
32
33
                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: KRATOCHVI
APPLICANT: ROBERTS-R
APPLICANT: RUSSELL,
APPLICANT: STROUPE,
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                               STREET: 100 ADDOCTOR CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Abbott Laboratories STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
5
5
6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              43, APP1---
lo. US20010010904A1
                                                                                                                                                                                                                                                                                                                                     H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/09050516
                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HAYDEN, I
                                                                                                                                                                                                                                                                                                                                                                                                                                      HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
ROSERTS-PAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
VENTION: REAGENTS AND METHODS USEFUL
VENTION: FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COHEN, MAURICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BILLING-MEDEL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1104
1416
1520
111
120
120
123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MARK
                                                                                                                                                                                                                                                                                                                                                                                                             TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EDWARD N
                                                                                                                                                08/828,855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-437-963-122399
US-10-767-701-38778
US-10-767-701-38778
US-10-425-115-344980
US-10-425-115-34539
US-10-437-963-179677
US-10-437-963-179677
US-10-437-963-14194
US-10-437-963-14194
US-10-97-143-24990
US-10-467-555-14
US-10-9867-550-1410
US-10-425-115-314833
US-10-425-115-329201
US-10-425-115-329201
US-10-425-115-22414
US-10-425-115-239201
                                                                           6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24990, A
14, Appl
1410, Ap
314833,
239201,
222414,
214955,
113542,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        198615,
335339,
179677,
304540,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                122399,
38778,
315597,
344980,
```

Minimum DB Maximum DB

seq length: 0
seq length: 2000000000

Total number of hits satisfying chosen parameters:

1867569 segs, 417829326 residues

Scoring table: Sequence: Title: Perfect score:

BLOSUM62 Gapop 10.0 , Gapext 0.5

US-10-646-873-43 189

MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR

36

OM protein -

protein search, using sw model

GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.

March 3, 2006, 14:09:14;

Search time 15.8134 Seconds (without alignments) 951.209 Million cell updates/sec

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database

Result

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Published Applications AA Main:\*

1: /cgn2\_6/ptodata/1/pubpaa/US07\_PUBCOMB.pep:\*

2: /cgn2\_6/ptodata/1/pubpaa/US08\_PUBCOMB.pep:\*

3: /cgn2\_6/ptodata/1/pubpaa/US08\_PUBCOMB.pep:\*

4: /cgn2\_6/ptodata/1/pubpaa/US10A\_PUBCOMB.pep:\*

5: /cgn2\_6/ptodata/1/pubpaa/US10B\_PUBCOMB.pep:\*

6: /cgn2\_6/ptodata/1/pubpaa/US11\_PUBCOMB.pep:\*

ĕ

Score

Match 100.0

Length DB

Description

Sequence

Sequence Sequence

100 100

US-09-050-516-43
US-10-278-547-43
US-10-646-873-47
US-10-278-547-47
US-10-278-547-42
US-10-278-547-42
US-10-278-547-42
US-10-278-547-42
US-10-278-547-42
US-10-425-115-31348
US-10-425-115-38611
US-10-425-115-38611
US-10-425-115-236611
US-10-425-115-21883
US-10-425-114-42907
US-09-991-936-1883
US-10-97-245-1883
US-10-97-245-1883
US-10-97-245-1883
US-10-97-245-1883
US-10-97-245-1883
US-10-97-143-22956
US-10-97-143-22956
US-10-425-115-284578
US-10-425-115-284578

Sequence Sequence 215 215 215 679 679

Sequence Sequence Sequence Sequence

43, Appl 43, Appl 43, Appl 47, Appl 47, Appl 47, Appl 47, Appl 42, Appl 42, Appl 42, Appl 42, Appl 311348, 311348,

Sequence Sequence

Sequence Sequence

5275, *I* 308283,

00

59.50 59.50 58.50 58.50 58.60 58.60 58.60 58.60 58.60 58.60 58.60 58.60 58.60 58.60 58.60 58.60 58.60 58.60 58.60 58.60 58.60

950 494 1124 1124 118 118 1453 453 453 453 1219 1106 435 435

Sequence Sequence

Sequence

179332, 22956, A 28838, A

Sequence

45482 240156,

Appl

Sequence Sequence Sequence Sequence Sequence

34.4 31.5 31.5 31.5 31.5 30.7 30.7 30.7 30.7 30.7

SEQUENCE CHARACTERISTICS:

```
RESULT 2
US-10-278-547-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-050-516-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 43, Application No. US20030 GENERAL INFORMATION:
APPLICANT: BILL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                         TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 43:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: 11
                                                                                                                                                         PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/09/050,516

FILING DATE: <Unknown>
APPLICATION NUMBER: 08/828,855

FILING DATE: 31-MAR-1997

ATTORNEY/AGENT INFORMATION:

NAME: Becker, Cheryl L.

REGISTRATION NUMBER: 35,441

REFERENCE/DOCKET NUMBER: 6065.US.P1

TELEPHONE: 847/938-1729

TELEPHONE: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS:
TOPOLOGY: linear MOLECULE TYPE: No. US20030082619Ale SEQUENCE DESCRIPTION; SEQ ID NO: 43:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                36; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                LENGTH: 36 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/10/278,547 FILING DATE: 23-Oct-2002 CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FABTSEQ for Windows Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Abbott Park
STATE: IL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/10278547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US20030082619A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN GRANADOS, EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BILLING-MEDEL, PATRICIA COHEN, MAURICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No. US20010010904A1e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 189; DB 3;
Pred. No. 1.2e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                      6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
```

```
TOPOLOGY: Inear
;
MOLECULE TYPE: No. US20040043406A1e
; SEQUENCE DESCRIPTION: SEQ ID NO: 43:
US-10-646-873-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-646-873-43; Sequence 43, Application US/10646873; Publication No. US20040043406A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-278-547-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Query Match 100.0%; Score 189; DB 4
Best Local Similarity 100.0%; Pred. No. 1.2e-1
Matches 36; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 43:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/646,873
APPLICATION UMBER: US/10/646,873
FILING DATE: 22-Aug-2003
CLASSIFICATION: Cunknown>
PRIOR APPLICATION UMBER: US/09/050,516
APPLICATION NUMBER: US/09/050,516
FILING DATE: 31-MAR-1998
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HAYDEN, MARK
HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
KRATOCHV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: BILLING-MEDEL, PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                  TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GORDON, JULIAN GRANADOS, EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COHEN, MAURICE COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 189; DB 4;
100.0%; Pred. No. 1.2e-16;
tive 0; Mismatches 0;
                                                                                DB 4; Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
    Indels
    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
    0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               १
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 4
US-09-050-516-47
밁
                        ঠ
                                                                                                                       ; STRANDEDNESS: single TOPOLOGY: linear MOLECULE TYPE: No. US20010010904Ale US-09-050-516-47
                                                           Query Match
Best Local Similarity
Matches 36; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Common
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                    INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 215 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
TITLE OF INVENTION: FOR DETECTING DISEASES OF THE GASTROINTESTINAL
NUMBER OF SEQUENCES: 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                            FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/8
FILING DATE: 31-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  \PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/09050516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100 Abbott Laboratories
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
                                                                                                                                                                                                                                                                     847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
                                                           100.0%;
ilarity 100.0%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BILLING-MEDEL, PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GRATOCHVIL, JON D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0010904A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S, STEVEN C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              us/09/050,516
                                                                                                                                                                                                                                                                                                                                                                                              08/828,855
                                                                                                                                                                                                                                     47:
                                                           Score 189; DB 3; I
Pred. No. 8.8e-16;
Pred. No. 8.8e-16;
                                                              0
                                                                                                                                                                                                                                                                                                                   6065.US.P1
                                                                                           Length 215;
                                                                Indels
                                                              0
                                                                Gaps
                                                                0
```

RESULT 5

US-10-646-873-47
; Sequence 47, Application No. US2004
; Publication No. US2004
; GENERAL INFORMATION:

Application US/10646873 vo. US20040043406A1

APPLICANT:

BILLING-MEDEL, PATRICIA COHEN, MAURICE

```
US-10-278-547-47
                                                         밁
                                                                                                                                                                                                             MOLECULE TYPE: NO. US20030082619A1e; SEQUENCE DESCRIPTION: SEQ ID NO: 47: US-10-278-547-47
                                                                                            á
RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 47, Application US/10278547 Publication No. US20030082619A1
                                                                                                                                     Matches
                                                                                                                                                      Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                       TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                                         1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                    1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                       36;
                                                                                                                                     Similarity 100.0%; 36; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/10/278,547 FILING DATE: 23-Oct-2002 CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                  TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/09/050,516
FILING DATE: «Unknown»
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: Abbott Park
                                                                                                                                                                                                                                                                                            STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                           TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BILLING-MEDEL, PATRICIA COHEN, MAURICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GRANADOS, EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                                     100.0%; Score 189; DB 4;
100.0%; Pred. No. 8.8e-16;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TRACT
                                                                                                                                                                            Length 215;
                                                                                                                                           0
                                                                                                                                           Gaps
                                                                                                                                           0
```

APPLICANT:

KLASS, MICHAEL R.

```
US-09-050-516-42
                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-646-873-47
                                                                                                                                                             Sequence 42, Application US/09050516
Patent No. US20010010904A1
                                                                                                                                                                                                                                                                                                                                                Matchев
                                                                                                                                                                                                                                                                                                                                                                 Best Local
                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 47:
                                                                        APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                       APPLICANT:
                                                         APPLICANT:
                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: 30-MAR-1998
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear MOLECULE TYPE: No. US20040043406Ale SEQUENCE DESCRIPTION: SEQ ID NO: 47:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: FastSEQ for Windows Version 2.0 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                 INFORMATION
                                                                                                                                                                                                                                                                                                                                                36;
                                                                                                                                                                                                                                                                                               1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                       MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/10/646,873
FILING DATE: 22-Aug-2003
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM Compatible OPERATING SYSTEM: DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE: IL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 100 Abbott Park Road CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ENGTH: 215 amino acids
                                 BILLING-MEDEL, PATRICIA COHEN, MAURICE COLPITTS, TRACEY L. FRIEDWAN, PAULA N. GORDON, JULIAN GRANADOS, EDWARD N.
                                                                                                                                                                                                                                                                                                                                                Conservative
HAYDEN, MARK
HODGES, STEVEN C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HAYDEN, MAKA
HODGES, STEVEN C.
KLASS, MICHAEL R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GRANADOS, EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                            Score 189; DB 4;
Pred. No. 8.8e-16;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                Length 215;
                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                              0
```

```
MOLECULE TYPE: No. US20010010904Ale US-09-050-516-42
                                                                                                                                                                                                                                                                                                                  RESULT 8
US-10-278-547-42
                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                             Sequence 42, Application US/10278547 Publication No. US20030082619A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 679 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION DATA:
PRIOR APPLICATION UMBER: 08/828
APPLICATION UMBER: 08/828
PILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,44
                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: Fast-SEQ for Windows Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 600
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS: Sil
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: Abbott Laboratories STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Abbott Park
                                                                                                                                                                                                   APPLICANT: BILLING-MEDEL, PATRICIA
COHEN, MAURICE
COLPITTS, TRACEY L.
NUMBER OF SEQUENCES:
                                                      TITLE OF
                                                                                                                                                                                                                                                                                                                                                                                                465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        36;
                                                                                                                                                                                                                                                                                                                                                                                                                        MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RUSSELL, JOHN C.
STROUPE, STEPHEN D.
STROUPE, STEPHEN D.
VENTION: REAGENTS AND METHODS USEFUL
VENTION: FOR DETECTING DISEASES OF THE GASTROINTESTINAL
VENTION: TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 189; DB 3; llarity 100.0%; Pred. No. 3.1e-15; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KRATOCHVIL, JON D. ROBERTS-RAPP, LISA
                                                  HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATCCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
                                                                                                                                                  GRANADOS,
                                                                                                                                                                   FRIEDMAN, PAULA N. GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 us/09/050,516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       08/828,855
                 FOR DETECTING DISEASES OF THE GASTROINTESTINAL TRACT
                                                                                                                                                  EDWARD N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 42:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

CORRESPONDENCE ADDRESS:

ADDRESSEE: Abbott Laboratories STREET: 100 Abbott Park Road

```
믕
                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-646-873-42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-278-547-42
                                                                                                                                                                                                                                                                                                                                                                             Sequence 42, Appropriate Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 42:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/09/050,516
FILING DATE: «Unknown»
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DCCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE: No. US20030082619A1e SEQUENCE DESCRIPTION: SEQ ID NO: 42:
CORRESPONDENCE ADDRESS:
ADDRESSE: Abbott Laboratories
STREET: 10: Abbott Park Road
CITY: Abbott Park
                                                                                                                                          TITLE OF
                                                                              NUMBER OF SEQUENCES: 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: 100 Abbott Park Road
CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 679 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                               Application US/10646873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
ilarity 100.0%;
Conservative 0,
                                                                                                                   HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                             US20040043406A1
                                                                                                                                                                                                                                                                          BILLING-MEDEL, PATRICIA
COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
                                                                                                                                                                                                                HAYDEN, MARK
                                                                                                                                                                                                                                         GRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      847/935-1729
                                                                                                                                                                                                                                                             JULIAN
                                                                                                       TRACT
                                                                                                                                                                                                                                       EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 189; DB 4;
Pred. No. 3.1e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 4; Length 679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
```

```
TOPOLOGY: linear;

MOLECULE TYPE: NO. US20040043406Ale
SEQUENCE DESCRIPTION: SEQ ID NO: 42:
US-10-646-873-42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뭉
                                                                                 ; FEATURE:
; OTHER INFORMATION: Clone ID: MRT4577_47002C.1.pep
US-10-425-115-311348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 10
US-10-425-115-311348
                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/10/425,115
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 369326
SEQ ID NO 311348
LENGTH: 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 36; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 311348, Application US/10425115 Publication No. US20040214272A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
Query Match
Best Local Similarity
Matches 11; Conserv
                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: La Rosa, Thomas J.
APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nücleic Acid Molecules and Other Molecules Associated With
FILE REFERENCE: 38-21(53222)B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 42:
                                                                                                                                               NAME/KEY: unsure
LOCATION: (1)..(88)
OTHER INFORMATION: unsure at all Xaa locations
                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                 ORGANISM: Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/10/646,873
PILING DATE: 22-Aug-2003
CLASSIFICATION: cUnknowns
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/09/050,516 FILING DATE: 30-MAR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 679 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 08/828,855 FILING DATE: 31-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
ilarity 100.0%;
Conservative (
                   34.4%; Score 65; DB 4; Length 88; 47.8%; Pred. No. 1.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 189; DB 4;
Pred. No. 3.1e-15;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6065.US.P1
    10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
```

0;

<u>ب</u>

Mismatches

<u>,</u>

Gaps

```
RESULT 13
US-10-425-115-238611
Sequence 238611, Application US/10425115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Aziz, Natasha
APPLICANT: Zlotnik, Albert
APPLICANT: Zlotnik, Albert
TITLE OF INVENTION: METHODS OF DIAGNOSIS OF METASTATIC CANCER, COMPOSITIONS AND
TITLE OF INVENTION: METHODS OF SCREENING FOR MODULATORS OF METASTATIC CANCER
FILE REFERENCE: file
CURRENT APPLICATION UMMBER: US/10/756,149
CURRENT FILING DATE: 2004-01-12
NUMBER OF SEQ ID NOS: 5818
SOFTWARE: PatentIn version 3.2
SEQ ID NO 5275
LENGTH: 950
TYPE: PAT
ORGANISM: Homo Sapiens
US-10-756-149-5275
                                                                                                     닭
                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 12
US-10-425-115-308283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 11
US-10-756-149-5275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ş
                                                                                                                                                                                                                                                 US-10-425-115-308283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 5275, Application US/10756149 Publication No. US20050181375A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 308283, Application US/10425115
Publication No. US20040214272A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 42.4%;
                                                                                                                                                                            Matches
                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 308283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: Nucleic Acid Molecules
TITLE OF INVENTION: Plants
FILE REFERENCE: 38-21(53222)B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: La Rosa, Thomas J. APPLICANT: Kovalic, David K.
                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/10/425,115
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 369326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Zhou, Yihua APPLICANT: Cao, Yongwei
                                                                                                                                                                                                                                                                                    FEATURE:
NAME KEY: unsure
LOCATION: (1)..(494)
OTHER INFORMATION: unsure at all Xaa locations
                                                                                                                                                                                                                                                          PEATURE: PEATURE: OTHER INFORMATION: Clone ID: MRT4577_44220C.1.pep
                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 494
TYPE: PRT
ORGANISM: Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        663 SDROVPHSSREPVGHKEESPKGPGGGPAASGGV 695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 SPRHLSESSGKPLSTKQEASKPPRGCPQANRGV 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14;
                                                                                                     8
                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GKPLSTKQEASKPPRGCPQANRG
                                                                                                                                         SPRHLSESSGKPLSTKQEASKPPRGCPQANR 32
                                                                                                     SPRRISPSPTPAPSTPRPASPPSNAPSSKR 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GRPXGCPQGQGXPPQGCPQMRRG
                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                         31.7%;
                                                                                                                                                                        ; Score 60; DB;
; Pred. No. 49;
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 63; DB 5; Length 950; Pred. No. 42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13;
                                                                                                                                                                            15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Other Molecules Associated
                                                                                                                                                                                                               Length 494;
                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                            0
                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         With
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                            0
```

```
APPLICANT: La Rosa, Thomas J.
APPLICANT: Kovalic, David K.
APPLICANT: Kovalic, David K.
APPLICANT: Cao, Yongwei
TITILS OF INVENTION: Nucleic Acid Molecules and Otl
TITILS OF INVENTION: Plants
FILE REFERENCE: 38-21(53222)B
CURRENT APPLICATION NUMBER: US/10/425,115
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 369326
SEQ ID NO 238611
LENGTH: 112
                                                                                                                                                                                                                                                                      TITLE OF INVENTION: Find Nucleic Acid Molecules and Other Molecules Associated With TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement FILING TAPTICATION NUMBER: US/10/437,963; CURRENT FILING DATE: 2003-05-14 NUMBER OF SEQ ID NOS: 204966
LENGTH: 344
TYPE: PRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , OTHER INFORMATION: Clone ID: MRT4577_149200C.1.pep US-10-425-115-238611
                                8
                                                                                                                                            US-10-437-963-113926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-437-963-113926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 113926, Application US/10437963 Publication No. US20040123343A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Publication No. US20040214272A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                       Matches
                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: La Rosa, Thomas J.
APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
ORGANISM: Zea mays
                                                                                                                                                       FEATURE: OTHER INFORMATION: Clone ID: PAT_MRT4530_17668C.1.pep
                                                                                                                                                                                            NAME/KEY: unsure
LOCATION: (1)..(344)
OTHER INFORMATION: unsure at all Xaa locations
                                                                                                                                                                                                                                                             ORGANISM: Oryza sativa
                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
nes 13; Conserv
                                                                                     Local
 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         44 PRSSSSSRARPLGTRSPALKPSPRSC 69
                                                                                     Similarity
PRHOEAPXGAPLRRRRTSPAPPRPSPXSTR 164
                                    PRHLSESSGKPLSTKQEASKPPRGCPQANR 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRHLSESSGKPLSTKQEASKP-PRGC 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31.5%;
ilarity 50.0%;
Conservative
                                                                       Conservative
                                                                                     31.2%;
                                                                 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 59.5; D. Pred. No. 11; 2; Mismatches
                                                                                       Score 59; DB 4; Length 344; Pred. No. 44;
                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 4; Length 112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Other Molecules Associated
                                                                       15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ۲,
                                                                       <u>.</u>
                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ۲.
                                                                       0
```

RESULT 15 US-10-425-115-270466 ; Sequence 270466, Application US/10425115 ; Publication No. US20040214272A1

Contraction of the second seco

```
Regult
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%.
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                               47.5
47.5
                                                                                                                                                                                                  protein search, using sw
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Published Applications AA_New:*

1: /cgn2 6/ptodata/1/pubpaa/USOS NEW_PUB.pep:*

2: /cgn2 6/ptodata/1/pubpaa/USOS NEW_PUB.pep:*

3: /cgn2 6/ptodata/1/pubpaa/USO7 NEW_PUB.pep:*

4: /cgn2 6/ptodata/1/pubpaa/PCT NEW_PUB.pep:*

5: /cgn2 6/ptodata/1/pubpaa/USOS NEW_PUB.pep:*

6: /cgn2 6/ptodata/1/pubpaa/USOS NEW_PUB.pep:*

7: /cgn2 6/ptodata/1/pubpaa/USOS NEW_PUB.pep:*

8: /cgn2 6/ptodata/1/pubpaa/USOS NEW_PUB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-646-873-43
189
                                                                                                                                                                                                                                                                                                                                              Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       135346 seqs, 20000420 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           March 3, 2006, 14:10:51 ; Search time 1.71429 Seconds
(without alignments)
420.009 Million cell updates/sec
 27.5
27.0
27.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore version 5.1.7 Copyright (c) 1993 - 2006 Biocceleration Ltd
                                                                                                                                                                                                                                                                                                                                              Length
                                                                              768
2769
459
473
473
2760
2803
2803
2984
3027
96
                          954
218
451
512
                                                                                                                                                                                                                                                                                                                                                BB
US-10-055-877-203
US-10-821-234-998
US-11-072-512-3034
US-11-072-512-3034
US-11-173-893-4
US-11-173-893-4
US-11-173-893-4
US-11-173-893-4
US-11-173-893-4
US-11-173-893-2
US-11-173-893-382
US-11-173-893-382
US-11-173-870-444
US-10-370-370-444
US-11-124-3670-444
US-11-124-3670-447
US-11-124-3670-447
US-11-124-3670-447
US-11-124-3670-447
US-11-124-3670-49-504-29-5642
US-11-124-3670-9-5642
US-11-124-3670-9-5642
US-11-124-3670-9-5642
US-11-124-3670-9-5642
US-11-124-3670-9-5642
US-11-124-3670-9-5642
US-11-124-3670-9-5642
US-11-124-3670-9-5642
US-11-124-3670-9-9-6622
US-11-1087-099-1062
US-11-1087-099-1062
US-11-1087-099-1062
US-11-214-199-4
                                                                                                                                                                                                                                                                                                                                                ╏
                                                                                                                                                                                                                                                                                                                                                                                      SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mode1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 135346
           Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                Description
                                                                                                                                                                                                                                                                                                        Sequence
Sequence
                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                           Sequence
  Sequence
                                                                                                                                                          203, App
3474, App
3034, App
10, Appl
10, Appl
10, Appl
11, Appl
26, Appl
11, Appl
382, App
382, App
444, App
442, App
443, App
441, App
141, App
141, App
1470, Ap
352, App
396, Ap
7996, Ap
7996, Ap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 1
US-10-055-877-203
```

5	44	ü	2	41	6	39	8	37	36	5	34	ຜ	32	31	ö	9	28	27	8
46	46	46	46	46	46	46	46	46	46	46	46	46	46.5	47	47	47	47	47	47
24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.6	24.9	24.9		24.9		24.9
2102	1823	951	702	338	326	279	107	107	107	104	89	44	355	1839	885	845	837	388	327
9	σ	7	7	7	σ	g	σ	σ	σ	σ	σ	σ	σ	7	თ	7	7	σ	տ
US-10-995-561-990	US-10-995-561-988	US-11-121-438-14	US-11-098-686-10194	US-11-207-626A-33	US-10-330-773-169	US-10-878-556A-157	US-10-330-773-177	US-10-330-773-175	US-10-330-773-173	US-10-330-773-167	US-10-467-657-4718	US-10-467-657-2398	US-10-467-657-5428	US-11-087-099-9631	US-10-912-971-2	US-11-094-519A-42	US-11-094-519A-43	US-10-858-730-83	US-09-978-360A-750
Sequence 990, App	-	14,	TOTS	Sequence 33, Appl	169,		Sequence 177, App	•	•	•	ä	Sequence 2398, Ap	Sequence 5428, Ap	Sequence 9631, Ap	Sequence 2, Appli	Sequence 42, Appl	•	•	0

# ALIGNMENTS

			, ., ., ., ., ., ., ., ., ., .
FILE REFERENT CURRENT APPLI CURRENT FILING PRIOR PELLING PRIOR FILING PRIOR FILING PRIOR FILING PRIOR FILING PRIOR FILING PRIOR APPLIC PRIOR APPLIC PRIOR APPLIC PRIOR APPLIC PRIOR APPLIC PRIOR FILING PRIOR FILING PRIOR FILING PRIOR PILING PRIOR PILING	APPLICANT:	APPLICANT:	US-10-05-8//-203 Sequence 203, Applic GENERAL INFORMATION: APPLICANT: DeCristo APPLICANT: Padigar APPLICANT: Miller; APPLICANT: Tcherne APPLICANT: Anderso APPLICANT: Anderso APPLICANT: Balling APPLICANT: Balling
FILE REFERENCE: 21402-251 CURRENT APPLICATION NUMBER: US/10/055,877 CURRENT FILING DATE: 2002-01-22 PRIOR APPLICATION NUMBER: 60/262,892 PRIOR FILING DATE: 2001-01-19 PRIOR PILING DATE: 2001-01-23 PRIOR PILING DATE: 2001-01-23 PRIOR PILING DATE: 2001-01-24 PRIOR FILING DATE: 2001-01-24 PRIOR PILING DATE: 2001-01-25 PRIOR PILING DATE: 2001-01-25 PRIOR APPLICATION NUMBER: 60/264,117 PRIOR APPLICATION NUMBER: 60/264,119 PRIOR APPLICATION NUMBER: 60/264,139 PRIOR APPLICATION NUMBER: 60/264,139 PRIOR PILING DATE: 2001-01-25	<u> </u>	Spytek, Spytek, Ratelli, Ratelli, Robenda, Guo, Xiae Zerhusen Andrew, Maczes, P. Maczes, P. Materes, Maczes, Maczes, Maczes, Maczes, Baumgart:	Sequence 203, Application US/10055877 Sequence 203, Application US/10055877 Publication No. US20050288241A1 GRANERAL INFORMATION: APPLICANT: DeCristofaro, Marc APPLICANT: Padigaru, Muralidhara APPLICANT: Miller, Charles APPLICANT: Tchernev, Velizar APPLICANT: Tchernev, Velizar APPLICANT: Zhong, Mei APPLICANT: Anderson, David APPLICANT: Ballinger, Robert APPLICANT: Ballinger, Robert
	ьу		

```
밁
                                                                                                                                                                                                                                                                                                   ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 2
US-10-821-234-998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 687
TYPE: PRT
CORGANISM: Orycctolagus cuniculus
US-10-055-877-203
                                                                                                                                                                                                US-11-072-512-3474
                                                                                                                                                                                                                                                                                                                                                                                                             US-10-821-234-998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/10/821,234
CURRENT FILING DATE: 2004-04-07
PRIOR APPLICATION NUMBER: US 60/462,047
PRIOR FILING DATE: 2003-04-07
NUMBER OF SEQ ID NOS: 1704
SOFTWARE: pt SEQ_genes Version 1.0
SEQ_ID NO 998
                                                                                                                                                          Sequence 3474, Application US/11072512
Publication No. US20060029945A1
                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 998, A Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 203
                                                                   APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: PatentIn Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: Methods for Diagnosis and Treatment of Preeclampsia FILE REFERENCE: 821A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR FILING DATE: 2001-03-14
                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 514
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Labat
                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DR APPLICATION NUMBER: 60/263,351
DR FILING DATE: 2001-01-30
DR APPLICATION NUMBER: 60/272,870
DR FILING DATE: 2001-03-02
DR APPLICATION NUMBER: 60/275,990
DR FILING DATE: 20001-03-14
DR APPLICATION NUMBER: 60/275,927
DR APPLICATION NUMBER: 60/275,927
                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match 27.5%;
Local Similarity 53.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/264,478 FILING DATE: 2001-01-26
                                                                                                                                                                                                                                                                    461 RGLSSSSGSGSSKSQSSTSPEGQALENR 489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11 SSGKPV-TLQELWGP---CPRIRRGVRR 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9 SSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                   4 RHLSESSGKPLSTKQEASKPPRGCPQANR 32
                                                                                                                                                                                                                                                                                                                                          13;
                                                 SUGIYAMA, TOMOYASU
OTSUKI, TETSUJI
WAKAMATSU, AI
SATO, HIROYUKI
                                                                                                                          ISOGAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Andarmani, Si
Tang, Y. Tom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Stache-Crain, Birgit
ISHII, SHIZUKO
YAMAMOTO, JUN-ICHI
ISONO, YUUKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/10821234 to. US20050255114A1
                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 upar
                                                                                                                          TAKAO
                                                                                                                                                                                                                                                                                                                                                        27.0%;
44.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Susan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2.1
                                                                                                                                                                                                                                                                                                                                      ; Score 51; DB;
; Pred. No. 19;
3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 52; DB 6;
Pred. No. 19;
                                                                                                                                                                                                                                                                                                                                                                         DB 6; Length 514;
                                                                                                                                                                                                                                                                                                                                        13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 687;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4.
                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
```

```
APPLICANT: NAGAHARI, KENJI
APPLICANT: MASUHO, YASUHIKO
TITLE OF INVENTION: NOVEL full length cDNA
FILE REFERENCE: 08435-0191
CURRENT APPLICATION NUMBER: US/11/072,512
CURRENT FILING DATE: 2005-03-07
PRIOR APPLICATION NUMBER: US 60/350,978
PRIOR FILING DATE: 2002-01-25
PRIOR APPLICATION NUMBER: US 60/350,978
PRIOR FILING DATE: 2001-11-05
NUMBER OF SEQ ID NOS: 4096
SOFTWARE: PATENTIN Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; LENGTH: 732
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-072-512-3474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 4
US-11-072-512-3034
; ORGANISM: Homo sapiens
US-11-072-512-3034
                                                                                                                                                APPLICANT: NAGAHARI, KENJI
APPLICANT: MASUHO, YASUHIKO
TITLE OF INVENTION: NOVEL full length cDNA
FILE REFERENCE: 084335-0191
CURRENT APPLICATION NUMBER: US/11/072,512
CURRENT FILING DATE: 2005-03-07
PRIOR APPLICATION NUMBER: US 60/350,978
PRIOR FILING DATE: 2002-01-25
PRIOR APPLICATION NUMBER: JP 2001-379298
PRIOR FILING DATE: 2001-11-05
                                      NUMBER OF SEQ ID NOS: 4096
SOFTWARE: PatentIn Ver. 2.
SEQ ID NO 3034
LENGTH: 258
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 3034, Application US/11072512 Publication No. US20060029945A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: ISOGAI, TAKAO APPLICANT: SUGIYAMA, TOM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MSPRHLSESSGKPLSTKQEASKP-PRGCPQANR 32
                                                                                                                                                                                                                                                                                                                                                                                                                             NAGAI, KELLULI
IRIE, RYOTARO
TAMECHIKA, ICH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HIO, YURI
OTSUKA, KAORU
NAGAI, KEIICHI
IRIB, RYOTARO
TAMECHIKA, ICHIRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUGIYAMA, TOMOYA
OTSUKI, TETSUJI
WAKAMATSU, AI
SATO, HIROYUKI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MTP---PKSSQELLSVRQESVEPQPRGVPKKER
                                                                                                                                                                                                                                                                                                                                                                       SEKI, NAOHIKO
YOSHIKAWA, TSUTOMU
OTSUKA, MOTOYUKI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTSUKA, KAORU
NAGAI, KEIICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         YAMAMOTO, JUN-ICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEKI, NAOHIKO
YOSHIKAWA, TSUTOMU
OTSUKA, MOTOYUKI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ISONO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YURI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YUUKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOMOYASU
                                                                                                                                                                                                                                                                                                                                                                                                                                        ICHIRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 51; DB 7;
Pred. No. 28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 732;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4.
```

Gaps

2

용

```
RESULT 5
US-11-156-084-340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; SEQ ID NO 340
; LENGTH: 299
; TYPE: PRT
; ORGANISM: Prochlorococcus marinus str. MIT 9313
; ORGANISM: Prochlorococcus marinus str. MIT 9313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-11-173-893-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 26.5%;
Best Local Similarity 33.3%;
Matches 14, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Publication No. US20
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 10, Application US/11173893 Publication No. US20060029602A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Monsanto Technology LLC
TITLE OF INVENTION: Controlled expression of cytokinin biosynthetic genes leads to
TITLE OF INVENTION: agronomically interesting phenotypes
FILE REFERENCE: (38-21)
CURRENT APPLICATION NUMBER: US/11/156,084
CURRENT FILING DATE: 2005-06-17
NUMBER OF SEQ ID NOS: 364
SOFTWARE: PatentIn version 3.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 340,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:

MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOPTWARE: WinPatin (Genentech)
                                                                                                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/891,845
FILING DATE: 07/10/1997
                                                                                                                                                                                                                                         SOPTWARE: WinPatin (Ger
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS
                                                  CLASSIFICATION:
APPLICATION NUMBER: 60/021640
FILING DATE: 07/12/96
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PPLICANT: Schaefer, Gabriele M.
PPLICANT: Sliwkowski, Mark
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity 50.0%; Pred. No. 128 8; Conservative
                                                                                                                                                                                                    APPLICATION NUMBER: US/
FILING DATE: 07/01/2005
                                                                                                                                                                                                                                                                                                                                                                                                           STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TLE OF INVENTION: Gamma-Heregulin
                                                                                                                                                                                   CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  DDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 SPRHLSESS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9 SSGKPLSTKQEASKPP 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGKPITTQQGSSPPP 185
                                                                                                                                                                                                                                                                                                                                                                                          California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/11156084
                                                                                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US20060010515A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genentech, Inc.
                                                                                                                                                                                                                      US/11/173,893
             40,378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ---GKPLSTKQEASKPPRGCPQANRG 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 50; DB 'Pred. No. 12; 2; Mismatches
P1043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 7; Length 258;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 7; Length 299;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 7
                                     S.
   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                            Matches
```

밁

```
US-11-173-893-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-11-173-893-10
                                                                                                                                                                                                               US-11-173-893-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 4, Application US/11173893 Publication No. US20060029602A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 26.5%;
Best Local Similarity 37.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:

MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: WinPatin (Genentech)

CURRENT APPLICATION NUMBER: US/11/173,893

FILING DATE: 07/01/2005

CLASSIFICATION DATA:

APPLICATION DATA:

PRIOR APPLICATION DATA:

PRIOR APPLICATION DATA:

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/891,845

FILING DATE: 07/10/1997

CLASSIFICATION:

CLASSIF
                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                            TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Lee, Wendy M.
REGISTRATION NUMBER: 40,378
REFERENCE/DOCKET NUMBER: P10
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-1994
                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/021640 FILING DATE: 07/12/96 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Schaefer, Gabriele M.
APPLICANT: Sliwkowski, Mark
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       UMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: Amino Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 94080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE:
                                                                                                                                                                                                                                                                           LENGTH: 560 amino acids TYPE: Amino Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26 SPLECTTSPGYPLISSTVYSPPPRPLPRS 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11;
                                                                11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 SPRHLSESSGKPLSTKQEASKPPRGCPQA 30
2 SPRHLSESSGKPLSTKOEASKPPRGCPQA 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  910/371-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 501 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         415/952-9881
                                                                                                                                                                                                                                                                                                                                                                                                                                                       415/952-9881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Linear
                                                                                                                                                                                                                                               Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Genentech, Inc
                                                                                                       26.5%;
37.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gamma-Heregulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10:
                                                                                                                                                                                                                                                                                                                                                                                   4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 50; DB Pred. No. 25;
                                                                                                       Score 50;
Pred. No.
                                                                          Mismatches
                                                                                                           DB 7;
28;
                                                                          13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 501;
                                                                                                                                           Length 560;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                              <u>.</u>.
                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                              0
```

293 SPLFCTTSPGYPLTSSTVYSPPPRPLPRS 321

US-11-072-512-2622

RESULT 8

```
밁
                                                                                                                                                                                                                                                                                                                                                                          US-11-173-893-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 749
TYPE: PRT
ORGANISM: Homo sapiens
US-11-072-512-2622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: NAGAHARI, KENJI
APPLICANT: MASUHO, YASUHIKO
TITLE OF INVENTION: NOVEL full length cDNA
FILE REFERENCE: 084335-0191
CURRENT APPLICATION NUMBER: US/11/072,512
CURRENT FILING DATE: 2005-03-07
PRIOR APPLICATION NUMBER: US 60/350,978
PRIOR PILING DATE: 2002-01-25
PRIOR APPLICATION NUMBER: US 2001-379298
PRIOR FILING DATE: 2001-11-05
NUMBER OF SEQ ID NOS: 4096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 2622, Application US/11072512 Publication No. US20060029945A1
                                                                                                                                                                                                                                                                                                            Sequence 2, Application US/11173893
Publication No. US20060029602A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 2622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PPLICANT:
          COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WinPatin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                              APPLICANT: Schaefer, Gabriele M. APPLICANT: Sliwkowski, Mark TITLE OF INVENTION: Gamma-Heregu. NUMBER OF SEQUENCES: 11
SOFTWARE: WinPatin CURRENT APPLICATION DARRER: APPLICATION NUMBER:
                                                                                                                                                                                                          ADDRESSEE: Genentech,
                                                                                                                                                                       STREET: 460 Point San Bruno Blvd
                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match 26.5%;
Local Similarity 38.1%;
es 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                          132 SEASLDLQGRPVRT--EASVQPVACPQVSVISRPEPVANEGI 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7 SESS----GKPLSTKQEASKPPRGCPQ-----ANRGV 34
                                                                                                                        94080
                                                                                                                                                          California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WAKAMATSU, AI
SATO, HIROYUKI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUGIYAMA, TOMOY
OTSUKI, TETSUJI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEKI, NAOHIKO
YOSHIKAWA, TSUTOMU
OTSUKA, MOTOYUKI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (AMAMOTO, JUN-ICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'AMECHIKA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SONO,
                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YURI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RYOTARO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEIICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YUUKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SHIZUKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TAKAO
                                                                                                                                                                                                                                                             Gamma-Heregulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOMOYASU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ICHIRO
 US/11/173,893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 50; DB
Pred. No. 39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 7; Length 749;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ω
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                  US-11-113-424-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-11-113-424-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-11-173-893-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 10
                                                                                                                SOFTWARE: PatentIn Ver.
SEQ ID NO 14
LENGTH: 2769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 14, Application US/11113424
Publication No. US20050260713A1
GENERAL INFORMATION:
Matches
               Best Local Similarity
                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Beat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILE REFERENCE: 21402-225
CURRENT APPLICATION NUMBER: US/11/113,424
CURRENT FILING DATE: 2005-04-21
                                                                                                                                                                     NUMBER OF SEQ ID NOS: 190
                                                                                                                                                                                     PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/256,704
PRIOR FILING DATE: 2000-12-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 60/288,153
                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: 60/257,314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: Polypeptides and Nucleic Acids Encoding Same
                                                                                 TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 60/311,590
                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/322,358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 07/12/96
ATTORNEY/AGENT INFORMATION:
NAME: Lee, Wendy M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/891,845
FILING DATE: 07/10/1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 768 amino acids TYPE: Amino Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 40,378
REFERENCE/DOCKET NUMBER: P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/021640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE:
                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/294,075
                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/307,506
                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/315,617
                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/311,613
                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    293 SPLFCTTSPGYPLTSSTVYSPPPRPLPRS 321
11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 SPRHLSESSGKPLSTKQEASKPPRGCPQA 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gangolli et al.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          910/371-7168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           415/952-9881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21402-225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07/01/2005
                                                                                                                                                                                                                                                          2001-09-14
                                                                                                                                                                                   2001-05-02
                                                                                                                                                                                                                        2001-05-29
                                                                                                                                                                                                                                                                                           2001-07-24
                                                                                                                                                                                                                                                                                                                           2001-08-29
                                                                                                                                                                                                                                                                                                                                                             2001-08-10
                                                                                                                                                                                                                                                                                                                                                                                            2000-12-20
               26.5%;
37.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26.5%; Score 50; 37.9%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ν...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             P1043
5; Mismatches
               Score 50;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 7;
40;
                 1.6e+02;
                                   DB 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 768;
                                 Length 2769;
 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
 <u>..</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

밁

293

SPLFCTTSPGYPLTSSTVYSPPRRPLPRS 321

```
US-11-087-099-9854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-131-826A-382
; Sequence 382, Application US/10131826A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TYPE: PRT; ORGANISM: Glycine max US-11-087-099-9854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 9854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 9854, Application US/11087099 Publication No. US20060041961A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Abad, Mark S. et al.
TITLE OF INVENTION: Genes and Uses for Plant Improvement
FILE REFERENCE: 38-21(53450)B EP
CURRENT APPLICATION NUMBER: US/11/087,099
CURRENT FILING DATE: 2005-03-22
NUMBER OF SEQ ID NOS: 12464
                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 60/049911 PRIOR FILING DATE: 1997-06-18
                                                                                                                                                                                                                                                                                                                            CURRENT FILING DATE:
                                                                                                                                                                                                                                                                                                                                           URRENT APPLICATION NUMBER: US/10/131,826A
                                                                                                                                                                                                                                                                                                                                                              ITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC ITLE OF INVENTION: ACIDS ENCODING THE SAME ILE REPERENCE: P3330R1C128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ENGTH: 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Y Match 26.2%;
Local Similarity 24.5%;
                                                                                                                                                                                         FILING DATE: 1997-08-26
APPLICATION NUMBER: 60/059113
FILING DATE: 1997-09-17
                                                                                                                                              APPLICATION NUMBER: 60/059115
FILING DATE: 1997-09-17
                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/056974
                                                            APPLICATION NUMBER: 60/059122 FILING DATE: 1997-09-17
                                                                                                     APPLICATION NUMBER: 60/059117 FILING DATE: 1997-09-17
                                        APPLICATION NUMBER: 60/059184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             166 VTQRNLGEQEGIPRLRYVDQQLRQQKALQQLGVMRQAWRPQRGLPETSVSVLR 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MSPRHLSESSGKP--------LSTKQEASKPPRGCPQANRGVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Watanabe, Colin K
Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gao, Wei-Qiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Desnoyers, Luc
Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Godowski, Paul J.
Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tumae,Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Stewart, Timothy A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sherwood, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DeForge, Laura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Beresini,Maureen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US20050245730A1
                    1997-09-17
                                                                                                                                                                                                                                                                                                                         2002-04-24
60/059263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9; Mismatches 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 49.5;
Pred. No. 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 459;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

Query Match Best Local Similarity Matches 14; Conserv

Conservative

26.2%;

Score 49.5; Pred. No. 28

DB 6;

Length 473;

Mismatches

Indels

19;

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-973-115B-382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Homo Sapien 
US-10-131-826A-382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 382
                              NUMBER OF SEQ ID NOS: 550
SEQ ID NO 382
LENGTH: 473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 382, A Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Remaining Prior Application data removed - NUMBER OF SEQ ID NOS: 550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 60/059352
PRIOR FILING DATE: 1997-09-19
PRIOR APPLICATION NUMBER: 60/059588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Baker, Kevin P.
APPLICANT: Beresini, Maur
APPLICANT: DeForge, Laura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 1997-09-19
                                                                                                                                                                                                                                                                                                                            FILE REFERENCE: 39870-3330R1C300C1
CURRENT APPLICATION NUMBER: US/10/973,115B
CURRENT FILING DATE: 2004-10-22
PRIOR APPLICATION NUMBER: US 10/145,747
PRIOR FILING DATE: 2002-05-14
                                                                                              PRIOR FILING DATE: 1999-03-05
                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: US 10/028,072
PRIOR FILING DATE: 2001-12-19
PRIOR APPLICATION UNMBER: PCT/US00/32678
PRIOR FILING DATE: 2000-12-01
                                                                                                                                                                                                                                                                                                                                                                                                                               IITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES IITLE OF INVENTION: SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: US 09/581,742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 473
                                                                                                                                   APPLICATION NUMBER: US 60/135,736 FILING DATE: 1999-05-25
                                                                                                              APPLICATION NUMBER: US 60/123,090
                                                                                                                                                                           FILING DATE: 2000-03-02
                                                                                                                                                                                           APPLICATION NUMBER: PCT/US00/05746
                                                                                                                                                                                                           FILING DATE: 2000-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           376 PRHINDSPFGTLPGSAEPPLTAVRPEGSEPPGFPTSGPRRRPGCSRKNR 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3 PRHLSES-----SGKP--LSTKQEASKPP------RGCPQANR 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gurney, Austin L.
Sherwood, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goddard, Audrey
Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tumas, Daniel
Watanabe, Colin K.
Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Stewart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/10973115B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US20060040351A1
sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wei-Quiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Maureen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 49.5;
Pred. No. 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     See File Wrapper or PALM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUCLEIC ACIDS ENCODIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
```

۲,

```
APPLICANI: HONGI'IN Huang

TITLE OF INVENTION: Genetic Polymorphisms Associated with

TITLE OF INVENTION: Fibrosis Methods of Detection and Uses Thereof

FILE REFERENCE: CL001519.ORD

CURRENT APPLICATION NUMBER: US/11/124,367A

CURRENT FILING DATE: 2005-05-09

PRIOR APPLICATION NUMBER: US 60/568,846

PRIOR FILING DATE: 2004-05-07

PRIOR APPLICATION NUMBER: US 60/582,609

PRIOR APPLICATION NUMBER: US 60/582,609

PRIOR APPLICATION NUMBER: US 60/599,554

PRIOR APPLICATION NUMBER: US 60/599,554

PRIOR FILING DATE: 2004-08-09

NUMBER OF SEQ ID NOS: 34460

SOUTHWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 444

LENGTH: 2760

TYPE: PRIT

ORGANISM: Homo Bapiens

US-11-124-367A-444
ነ<sup>ይ 8</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 14
US-11-124-367A-444
; Sequence 444, Application US/11124367A; Publication No. US20060024700A1
; Publication No. US20060024700A1
                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Michele Cargill
APPLICANT: Hongjin Huang
ITITLE OF INVENTION: Genetic Polymorphisms Associated with
ITITLE OF INVENTION: Fibrosis Methods of Detection and Uses Thereof
ITITLE OF INVENTION: Fibrosis Methods of Detection and Uses Thereof
ITITLE OF INVENTION NUMBER: US/11/124,367A
CURRENT FILING DATE: 2005-05-09
PRIOR APPLICATION NUMBER: US 60/568,846
PRIOR FILING DATE: 2004-05-07
PRIOR APPLICATION NUMBER: US 60/582,609
PRIOR PRIOR PRICATION NUMBER: US 60/582,609
PRIOR APPLICATION NUMBER: US 60/599,554
PRIOR APPLICATION NUMBER: US 60/599,554
PRIOR FILING DATE: 2004-08-09
PRIOR FILING DATE: 2004-08-09
PRIOR FILING DATE: 2004-08-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 15
US-11-124-367A-442
US-11-124-367A
; Sequence 442, Application US/11124367A
; Publication No. US20060024700A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 34460
SOPTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 442
LENGTH: 2803
                                                                                                                        Query Match 26.2%; Score 49.5; DB 7; Best Local Similarity 39.3%; Pred. No. 1.9e+02; Matches 11; Conservative 3; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 26.2%;
Best Local Similarity 39.3%;
Matches 11; Conservative
                                                                                                                                                                                                                           TYPE: PRT
ORGANISM: Homo sapiens
:-11-124-367A-442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Michele Cargill APPLICANT: Hongjin Huang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2419 SGGPPSSASPEVEAGPQGCATEPRPHRG 2446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 376 PRHINDSPFGTLPGSAEPPLTAVRPEGSEPPGFPTSGPRRPGCSRKNR 424
                        SGGPPSSASPEVEAGPQGCATEPRPHRG 2446
                                                     SSGKPLSTKQEASKPPRGC---PQANRG 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SSGKPLSTKQEASKPPRGC---PQANRG 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRHLSES-----SGKP--LSTKQEASKPP------RGCPQANR 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11; Indels
                                                                                                                                                                           Length 2803;
                                                                                                                             Indels
                                                                                                                           ω
-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                           Gaps
                                                                                                                           ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1;
```

Search completed: March 3, 2006, 14:19:03 Job time : 2.71429 secs

1,

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                    Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM protein -
                                                                                                                                                                        Database
                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                    Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                      BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-646-873-44
146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              March
                                                                                                                                                                                                                                                                                                                                                                                2443163 seqs, 439378781 residues
                                                                                                                                                                      A_Geneseq_21:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd
                     geneseqp2003as:*
geneseqp2003bs:*
geneseqp2004s:*
                                                                                          geneseqp2000s:*
geneseqp2001s:*
                                                                                                                                 geneseqp1990s:*
                                                                                                                                                       geneseqp1980s:*
geneseqp2005a:*
                                                                            geneseqp2002s:*

    2006, 13:19:17; Search time 16.5695 Seconds
(without alignments)
    822.038 Million cell updates/sec

                                                                                                                                                                                                                                                                                                                                                   2443163
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	80		tion
	146	100.0	31	ผ	AAW79678	Aaw79678 Synthetic
N I	146	100.0	31	4	AAE07321	
w	146	100.0	31	თ	ADA26381	Ada26381 Synthetic
4	146	٠	31	œ	ADN17174	Adn17174 CS198 pep
<sub>ເ</sub>	146	100.0	215	N	AAW79681	Aaw79681 Human CS1
o	146	100.0	215	Δ.	AAE07324	Aae07324 Human CS
7	146	100.0	215	0	ADA26384	•
8	146	100.0	215	8	ADN17177	Adn17177 CS198 pro
ø	146	100.0	672	4	AAM79574	Aam79574 Human pro
10	146	100.0	679	N	AAW79676	Aaw79676 Human CS1
11	146	100.0	679	4	AAE07319	Aae07319 Human CS
12 .	146	100.0	679	4	AAM78590	Humar
13	146	100.0		0	ADA26379	Predic
14	146	100.0	679	7	ADG14341	1 Human
15	146	100.0	679	8	ADN17172	
16	146	100.0	692	8	ADX97562	N
17	142	97.3	172	4	AAG73987	_
18	68	46.6	1439	8	ADR12189	Adr12189 Trichohya
19	68	46.6	1439	œ	ADU77050	Adu77050 Murine ha
20	68	46.6	1439		ADW00404	Adw00404 Epithelia
21	59	40.4	357		ABU53268	Abu53268 Human tes
22	59	40.4	524	N	AAW32096	Aaw32096 Miniature
23	59	40.4	524	4.	AAB73285	Aab73285 Retoviral
24	59	40.4	524	ú	AAO19011	Aao19011 Porcine e

45	44	43	42	41	40	39	38	37	36	35	34	မှ	32	31	30	29	28	27	26	25
55	55	55	55	55	55	55.5	56	56	56	56	56	56	56	57	58	58	58	58.5	59	59
37.7	37.7	37.7	37.7	37.7	37.7	38.0	38.4	38.4	38.4	38.4	38.4	38.4	38.4	39.0	39.7	39.7	39.7	40.1	40.4	40.4
224	224	224	144	143	109	500	985	985	828	828	322	322	219	1893	894	524	230	689	744	524
7	σ	0	4.	4	4	U	4	4	œ	7	œ	0	œ	4.	4	σ	9	4	8	œ
ADJ70695	AA026229	ADA54938	ABU53278	ABG20989	ABU53270	ABP73751	ABB66752	ABB63557	ADU48365	ADE65842	ADL05434	ABU35341	ADX94706	ABB59829	ABB64737	ABJ25645	ADY65542	ABB62614	ADS73450	AUS/3446
Adj70695		_	-		_			_	_			•	•			_			_	
Human hea	MDDT rela	Human pro	Human tes	-	_	Candida a	Drosophil	Drogophii	Human col	Human col	M. catarr	Protein e	Plant tul	Tragognii	Trudosoun	Aspergiti	S. manison	Trudosoru	Swine rec	

## ALIGNMENTS

RESULT 1 AAW79678 ZZZZZZZZZZZZZZZZ XXXXXXX Gastrointestinal tract; GI tract; cancer; disease; detection; CS19; human; predisposition; treatment; Barret's oesophagus; gastric ulcigastritis; leiomyoma; polyps; Crohn's disease; ulcerative colitis; Synthetic CS198 derived peptide #2. AAW79678 standard; protein; 31 AA. 31-MAR-1997; 30-MAR-1998; Synthetic. 11-JAN-1999 AAW79678; 08-OCT-1998. WO9844159-A1. pancreatitis. (first entry) 97US-00828855 98WO-US006251. cancer; disease; detection; CS198;

(ABBO ) ABBOTT LAB

Granados EN, Billing-Medel PA, Roberts-Rapp L, PA, Cohen M, Colpitts TL, Hayden M, Hodges SC, Klass L, Russell JC, Stroupe SD; Friedman PN, Gordon MR, Kratochvil JD;

Ç

WPI; 1998-542714/46.

New gastrointestinal polynucleotides, CS198, and their detection - used for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastritis.

Claim 26; Page 102; 127pp; English.

CCCCCCCX PXX PPTX DXX PPTX DXX PR AAW79677-W79680 are synthetic CS198 derived peptide fragments which are used in a method to detect the presence of a target human CS198 polynuclectide in a test sample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be used in detecting, diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oesophagus, gastric ulcer, gastritis, leiomyoma, polyps, oesophagus, ulcerative

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SXS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
     The invention relates to a method of detecting the presence of a target CS 198 polynucleotide comprising contacting the test sample with at least CS 198 specific polynucleotide. The method is useful for detecting diseases of the gastrointestinal (GI) tract organs, particularly cancer. The CS 198 polynucleotides, polypeptides and antibodies are useful for detecting, diagnosing, staging, monitoring, prognosticating, preventing, tract such as cancer, gastric ulcer, gastrities and conditions of the GI tract such as cancer, gastric ulcer, gastrities, Crohn's disease, ulcerative colitis, pancreatitis and Barret's oesophagus. The CS 198 polypeptides are useful as standards or reagents in diagnostic
                                                                                                                                                                    Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, comprises contacting test sample with at least one CS 198-specific polynucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CS 198; gastrointestinal tract disease; GI tract; cancer; gastric ulcer; gastritis; Crohn's disease; ulcerative colitis; pancreatitis; Barret's oesophagus; gene therapy; drug screening; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 31
                                                                                                                                              Claim 17; Page 51; 68pp; English.
                                                                                                                                                                                                                        WPI; 2001-496163/54.
                                                                                                                                                                                                                                                Roberts-Rapp
                                                                                                                                                                                                                                                           Granados EN,
                                                                                                                                                                                                                                                                      Billingel PA,
                                                                                                                                                                                                                                                                                                           (ROBE/)
                                                                                                                                                                                                                                                                                                                                                                                                 (FRIE/)
                                                                                                                                                                                                                                                                                                                                                                                                                          (COHE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US2001010904-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human CS 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAE07321;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAE07321 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 colitis, and pancreatitis
                                                                                                                                                                                                                                                                                                                                                (HODG/)
                                                                                                                                                                                                                                                                                                                                     KRAT/)
                                                                                                                                                                                                                                                                                                                                                                        HAYD/)
                                                                                                                                                                                                                                                                                                                                                                                       GRAN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Loca 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31;
                                                                                                                                                                                                                                                                                                                                                          GRANADOS E N.
HAYDEN M.
HODGES S C.
                                                                                                                                                                                                                                                                                              KRATOCHVIL J D.
ROBERTS-RAPP L.
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                          COLPITTS T L. FRIEDMAN P N.
                                                                                                                                                                                                                                                                                                                                                                                                                                    COHEN M
                                                                                                                                                                                                                                                                                                                                                                                                                                                BILLINGEL P A.
                                                                                                                                                                                                                                                                                                                                                KLASS M R.
                                                                                                                                                                                                                                                                                                                                                                                                 GORDON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RLOKSOSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                             , Cohen M,
Hayden M,
L, Russell
                                                                                                                                                                                                                                              Ļ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97US-00828855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98US-00050516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #2
                                                                                                                                                                                                                                             Colpitts TL, Friedman Hodges SC, Klass MR, JC, Stroupe SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 146; DB 2;
Pred. No. 1.9e-12;
; Mismatches 0;
                                                                                                                                                                                                                                                                       Friedman
                                                                                                                                                                                                                                                           PN, Gordon J;
Kratochvil JD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        immunoassays, as components or as target sites for various therapies. Antibodies directed against at least one epitope contained within these polypeptides are useful as delivery agents for therapeutic agents, in diagnostic tests and for screening for conditions or diseases associated with CS 198, particularly cancer. Monoclonal antibodies may also be used for the generation of chimeric antibodies for therapeutic use. The CS 198 polymucleotide is also useful in gene therapy and drug screening. The method capable of detecting early stage GI tract disease such as cancer. The present sequence is a peptide derived from human CS 198 polypeptide.
                                                                                           Billingel PA,
Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                    cancer prognosticating; cancer prevention; can
gastrointestinal tract disorder; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic peptide based on CS198 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADA26381 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                             WPI; 2003-596961/56
                                                                                                                                                                                                         (COLP/)
(COLP/)
(FRIE/)
(GORD/)
                                                                                                                                                                                                                                                                       31-MAR-1997;
30-MAR-1998;
                                                                                                                                                                                                                                                                                                    23-OCT-2002; 2002US-00278547.
                                                                                                                                                                                                                                                                                                                                                                                                         CS198; cancer diagnosis; cancer staging; cancer monitoring;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADA26381;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                consensus sequence
                                                                                Roberts-Rapp
                                                                                                                                                                                       (GRAN/)
                                                                                                                                                                   (KLAS/)
                                                                                                                                                                                                                                                   (BILL/)
                                                                                                                                                          KRAT/)
                                                                                                                                                                             HODG/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31;
                                                                                                                                                                          GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 RLQKSQSSDLLERERESVLRREQEVAEERRN
                                                                                                                                                                                                                COLPITTS T L. FRIEDMAN P N.
                                                                                                                         ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                        KLASS M R.
KRATOCHVIL J
                                                                                                                                                                                                                                                  BILLINGEL P A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RLQKSQSSDLLERERESVLRREQEVABERRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                               , Cohen M,
Hayden MA,
L, Russell
                                                                                ŗ
                                                                                                                                                                                                                                                                       97US-00828855.
98US-00050516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                               ۲v
                                                                                Colpitts TL,
Hodges SC,
JC, Stroupe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 146; DB 4;
Pred. No. 1.9e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                  Klass MR,
                                                                                                       Friedman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31
                                                                                                                                                                                                                                                                                                                                                                                                cancer;
                                                                                             PN, Gordon
Kratochvil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
```

Detecting the presence of a target CS198 polynucleotide in a test comprises contacting the sample with a CS198 specific polynucleoti

de in a test sample polynucleotide and

the test

comprises contacting the sample with a CS198 specific polydetecting the presence of the target CS198 polynucleotide

sample

Claim 17;

Page 51;

67pp; English

The invention describes a method of detecting the presence of a target CS198 polynucleotide in a test sample. The method comprises contacting the test sample with at least one CS198 specific polynucleotide or its complement, and detecting the presence of the target CS198 polynucleotide in the test sample, where the CS198-specific polynucleotide has at least solvide in the test sample, where the CS198-specific polynucleotide has at least solvide in the test sample, where the CS198-specific polynucleotide has at least solvide in the test sample, where the CS198-specific polynucleotide has at least solvide in the specification, or their fragments of 34-2894 bp (S1-27) given in the specification, or their fragments or complements. The composition and methods are useful in

conditions of the gastrointestinal tract, e.g. cancer and in gene therapy. This is the amino acid sequence of a synthetic peptide based the predicted human CS198 protein sequence derived from the CS198 consensus sequence shown in seq id 27.

9

diagnosing, staging, monitoring, prognosticating, preventing or treating or determining the predisposition of an individual to, diseases and

Query Match Best Local S Matches 31

Similarity

100.0%;

Conservative

0

Score 146; DB 6; Pred. No. 1.9e-12; ; Mismatches 0;

Length Indels

31,

<u>.</u> Gaps

0

Sequence

ដ

Ŋ,

```
RESULT 4
 유
                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                          Gastrointestinal tract; GI tract; CS198; cancer;
                                                                                                                                                                                                                                                                                                                     ADN17174 standard; peptide; 31 AA
                                                                                                                                                                                                                                           Unidentified
                                                                                                                                                                                                                                                                        CS198
                                                                                                                                                                                                                                                                                       17-JUN-2004
Diagnosing diseases such as cancer of the detecting aberrant expression or activity
                                             Billingel PA,
Granados EN,
                                                                                                                                                                         31-MAR-1997;
30-MAR-1998;
                                                                                                                                                                                              22-AUG-2003; 2003US-00646873.
                                                                                                                                                                                                             04-MAR-2004
                                                                                                                                                                                                                            US2004043406-A1
                                                                                                                                                                                                                                                                                                      ADN17174
                      WPI; 2004-313754/29
                                    Roberts-Rapp
                                                                                                      (HAYD/)
                                                                                                                     (GORD/)
                                                                                       (KRAT/
                                                                                                                                    (FRIE/)
                                                                                 ROBE/)
                                                                                                KLAS/
                                                                                                                                           COLP/)
                                                                                                                                                                                                                                                                                                                                                         .
•
                                                                                                                                                                                                                                                                        peptide
                                                                                                      GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
                                                                  RUSSELL J
STROUPE S
                                                                                                                                                          BILLINGEL P A.
                                                                                                                                  COLPITTS T L. FRIEDMAN P N.
                                                                                 KRATOCHVIL J
ROBERTS-RAPP
                                                                                                                                                   COHEN M.
                                                                                                KLASS M R.
                                                                                                                                                                                                                                                                                                                                                                  RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                         RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                     ŗ
                                                                                                                                                                                                                                                                                       (first
                                            Cohen
Hayden
                                                                                                                                                                                                                                                                         #2
                                                                                                                                                                         97US-00828855
98US-00050516
                                     Russell
                                                                   ۵Ü
                                                                                                                                                                                                                                                                                        entry)
                                            3.3
                                    Colpitts TL,
Hodges SC,
JC, Stroupe
                                      Klass
SD;
                                              Friedman PN, Gordon
Klass MR, Kratochvil
 gastrointestinal tract, by of the CS198 polypeptide,
                                                                                                                                                                                                                                                          gene therapy
                                             1 J;
          à
```

and

pancreatitis

Claim

Page 103; 127pp;

English.

This sequence represents the C-terminal of the human CS198 protein which is used in a method to detect the presence of a target CS198 polynucleotide in a test sample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be used in detecting, diagnosing, staying, monitoring, prognosticating, preventing or treating, or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oesophagus, gastric ulcer, gastritis, leiomyoma, polyps, Crohn's disease, ulcerative

New gastrointestinal polynucleotides, CS198, and their detection - used for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastritis.

Billing-Medel Granados EN,

Hayden M, PA,

M, Colpitts TL, Hodges SC, Klass JC, Stroupe SD;

Friedman MR, Krat

lman PN, Gordon
Kratochvil JD;

ij

Russell JC, Cohen M, (ABBO ) ABBOTT LAB

97US-00828855 98WO-US006251

Roberts-Rapp L,

1998-542714/46.

30-MAR-1998;

08-OCT-1998

WO9844159-A1. Homo sapiens

```
RESULT 5
AAM796H
ID AAW7
XX
AAC AAW7
XX
DI 11-J
DT 11-J
DX
XX
DE Huma
XX
KW Gast
KW Gast
KW gast
KW ganc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                         Gastrointestinal tract; GI tract; cancer; disease; detection; human; predisposition; treatment; Barret's oesophagus; gastric gastritis; leiomyoma; polyps; Crohn's disease; ulcerative colipancreatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          prevention and/or treatment of diseases or conditions associated with prevention and/or treatment of diseases or conditions associated with prevention and/or treatment of the CS198 polypeptide, such as cancer aberrant expression or activity of the CS198 polypeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 peptide used to illustrate the method of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polynucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 31 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      associated treatment methods
                                                                                                                                                                                                                                                                          Human CS198 protein C-terminal
                                                                                                                                                                                                                                                                                                          11-JAN-1999
                                                                                                                                                                                                                                                                                                                                            AAW79681;
                                                                                                                                                                                                                                                                                                                                                                            AAW79681 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     present sequence is a CS198 peptide used to illustrate the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    invention relates to reagents gastrointestinal (GI) tract. T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                         RLQKSQSSDLLERERESVLRREQEVABERRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ID NO 44; 67pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                             215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 146; DB 8;
Pred. No. 1.9e-12;
                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and methods for detecting diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 31;
                                                                                                                                                                                                               stric ulcer; colitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     & X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
     The invention relates to a method of detecting the presence of a target CS 198 polynucleotide comprising contacting the test sample with at least one CS 198 specific polynucleotide. The method is useful for detecting diseases of the gastrointestinal (GI) tract organs, particularly cancer. The CS 198 polynucleotides, polypeptides and antibodies are useful for detecting, diagnosing, staging, monitoring, prognosticating, preventing, treating or determining predisposition to diseases and conditions of the CI tract such as cancer, gastric ulcer, gastritis, Crohn's disease, ulcerative colitis, pancreatitis and Barret's oesophagus. The CS 198 polypeptides are useful as standards or reagents in diagnostic immunoassays, as components or as target sites for various therapies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CS 198; gastrointestinal tract disease; GI tract; cancer; gastritis; Crohn's disease; ulcerative colitis; pancreatitis; Barret's oesophagus; gene therapy; drug screening; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                             Claim 17; Page 52-53;
                                                                                                                                                                                   Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, contacting test sample with at least one CS 198-specific polynucle
                                                                                                                                                                                                                                        WPI; 2001-496163/54.
                                                                                                                                                                                                                                                                            Billingel PA,
Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                                            (COLP/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US2001010904-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human CS 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAE07324;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAE07324 standard; protein; 215 AA
                                                                                                                                                                                                                                                               Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                      (KLAS/)
                                                                                                                                                                                                                                                                                                                                                                                                                   (FRIE/)
                                                                                                                                                                                                                                                                                                                                                                                           (HAYD,
                                                                                                                                                                                                                                                                                                                                           (ROBE/)
                                                                                                                                                                                                                                                                                                                                                                               (HODG)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   l Similarity
31; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           \vdash
                                                                                                                                                                                                                                                                                                               RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                     GORDON J.
GRANADOS E N.
                                                                                                                                                                                                                                                                                                                                                                                                                             COLPITTS T L.
FRIEDMAN P N.
                                                                                                                                                                                                                                                                                                                                                                              HAYDEN M.
HODGES S C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BILLINGEL P A.
                                                                                                                                                                                                                                                                                                                                                      KRATOCHVIL J
                                                                                                                                                                                                                                                                                                                                                                    KLASS M R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          COHEN M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RLQKSQSSDLLERERESVLRREQEVAEERRN 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
ilarity 100.0%;
Conservative 0
                                                                                                                                                                                                                                                               Hayden M,
L, Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein C-terminal portion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97US-00828855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98US-00050516.
                                                                                                                                                                                                                                                                                                                                          r 0
                                                                                                                                                             68pp;
                                                                                                                                                                                                                                                               Colpitts TL, Friedman Hodges SC, Klass MR, JC, Stroupe SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                             English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 146; DB 2;
Pred. No. 1.6e-11;
; Mismatches 0;
                                                                                                                                                                                                                                                                                      Friedman
                                                                                                                                                                                                                                                                             PN, Gordon J;
Kratochvil JD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                      polynucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gastric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                   comprises
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ulcer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

Claim

52;

Page

52;

sample.

Detecting the presence of a target CS198 polynucleotide in a t comprises contacting the sample with a CS198 specific polynucl detecting the presence of the target CS198 polynucleotide in t

in the

test

est sample eotide and

```
RESULT 7
ADDA26384
ID ADDA26384
AC ADDA2
AC ADDA2
AC ADDA2
AC Synt
XX Ganc
KW Gast
KW Gast
KW Gast
KW Gast
KW Gast
AC ADDA2
XX II-N
PD 01-N
AC ADDA2
AC ADDA2
XX II-N
PR 30-I
PA (COI

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ពួកក្រុក ពួកក្រុក ព្រះ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Antibodies directed against at least one epitope contained within these polypeptides are useful as delivery agents for therapeutic agents, in diagnostic tests and for screening for conditions or diseases associated with CS 198, particularly cancer. Monoclonal antibodies may also be used for the generation of chimeric antibodies for therapeutic use. The CS 198 polymucleotide is also useful in gene therapy and drug screening. The method of the invention provides an alternative, non-surgical diagnostic method capable of detecting early stage GI tract disease such as cancer. The present sequence is C-terminal portion of human CS 198 polypeptide
                                                                                                                                                                                                                                                           Billingel PA,
Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cancer prognosticating; cancer prevention; car
gastrointestinal tract disorder; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic peptide based on CS198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US2003082619-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CS198; cancer diagnosis; cancer staging; cancer monitoring;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADA26384 standard; protein;
                                                                                                                                                                                          WPI; 2003-596961/56.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (FRIE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-OCT-2002; 2002US-00278547
                                                                                                                                                                                                                                   Roberts-Rapp
                                                                                                                                                                                                                                                                                                                                                                                                                                                 (HAYD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (COLE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (GRAN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (ATTIE)
                                                                                                                                                                                                                                                                                                                                                                                  ROBE/)
                                                                                                                                                                                                                                                                                                                                                                                                     KRAT/)
                                                                                                                                                                                                                                                                                                                                                                                                                        KLAS/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31;
                                                                                                                                                                                                                                                                                                                                                                                                                                            COLPITTS T L.
FRIEDMAN P N.
GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 RLOKSOSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                               ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                   KRATOCHVIL J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BILLINGEL P A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COHEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           215 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RLQKSQSSDLLERERESVLRREQEVAEERRN 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                   ŗ
                                                                                                                                                                                                                                   , Cohen M,
Hayden MA,
L, Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97US-00828855.
98US-00050516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                                                                                             ۲ņ
                                                                                                                                                                                                                                   Colpitts TL,
Hodges SC,
1 JC, Stroupe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 146; DB 4;
Pred. No. 1.6e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                                                                                                                                                                                        Klass MR,
                                                                                                                                                                                                                                                                Friedman PN, Gordon
Klass MR, Kratochvil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                              មូរ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
ADN1717 8
ADN1717 1 ID ADN11 XX ADN17 17-J
AC ADN1 XX ADN1 17-J
AC ADN1 XX Gast XX Gast XX Gast XX US20
AX US20
AX US20
AX S1-M
AX 31-M
AX (COL
AX 31-M
AX (COL
AX (CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention describes a method of detecting the presence of a target CS198 polynucleotide in a test sample. The method comprises contacting the test sample with at least one CS198 specific polynucleotide or its complement, and detecting the presence of the target CS198 polynucleotide in the test sample, where the CS198 specific polynucleotide has at least to the test sample, where the CS198 specific polynucleotide has a polynucleotide having any of the 27 fully defined sequences of 34-2894 bp (S1-27) given in the specification, or their fragments or complements. The composition and methods are useful in diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition of an individual to, diseases and conditions of the gastrointestinal tract, e.g. cancer and in gene therapy. This is the amino acid sequence of a synthetic peptide based on the predicted human CS198 protein sequence derived from the CS198 consensus sequence shown in seq id 27.
                                                                                                                                                          Billingel PA,
Granados EN,
Roberts-Rapp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gastrointestinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CS198 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADN17177;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADN17177 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US2004043406-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-JUN-2004
                        Diagnosing diseases such as cancer of the gastrointestinal tract, detecting aberrant expression or activity of the CS198 polypeptid associated treatment methods.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (COLP/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      31-MAR-1997;
30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22-AUG-2003; 2003US-00646873
                                                                                                                   WPI; 2004-313754/29
                                                                                                                                                                                                                                                                                                                         (HAYD/)
(HODG/)
(KLAS/)
(KRAT/)
                                                                                                                                                                                                                                                                                                                                                                                                                       (GORD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (FRIE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \vdash
                                                                                                                                                                                                                                                                                                                       GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
KLASS M R.
KLASS M R.
KLASS M R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           COLPITTS T L.
FRIEDMAN P N.
                                                                                                                                                                                                                                                        ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BILLINGEL P A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          215 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RLOKSOSSDLLERERESVLRREQEVAEERRN 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RLQKSQSSDLLERERESVLRREQEVAEERRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                            , Cohen M,
Hayden MA,
L, Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first
                                                                                                                                                               ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97US-00828855.
98US-00050516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tract;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein; 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                        F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ពួ
                                                                                                                                                               Colpitts TL,
Hodges SC,
JC, Stroupe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tract; CS198; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 146; DB 6;
Pred. No. 1.6e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                   IL,
                                                                                                                                                               Klass
SD;
                                                                                                                                                                                       Friedman
Klass MR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                       PN, Gordon
Kratochvil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 therapy
                                                  polypeptide, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>.</u>
                                                                                                                                                                                         ā:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                        γd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
```

The invention relates to polynucleotides (AAK51456-AAK53435) and tencoded polypeptides (AAM78323-AAM80302) that exhibit activity elacytokine, cell proliferation or cell differentiation or which may production of other cytokines in other cell populations. The

(AAK51456-AAK53435) and the

elating

0,

induce

Nucleic acids encoding polypeptides with cytokine-like

activities, useful

diagnosis and gene therapy.

Claim

20;

Page

288; 6221pp; English.

Xue

Ę

N-PSDB;

2001-476283/51. DB; AAK52707.

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   prevention and/or treatment of diseases or conditions associated with aberrant expression or activity of the CS198 polypeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 protein used to illustrate the method of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention the gastrointestinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polynucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis,
                                                                                                                                                                                                                                                                                                                                                                                                  vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; immunomodulatory; cancer; leukaemia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAM79574 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 17; SEQ ID NO
                                                                                                                                                  Tang
Ma Y,
                                                                                                                                                                                                                                                                      03-FEB-2000;
27-APR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                       Human; cytokine; cell proliferation; cell differentiation; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Human protein SEQ ID NO 3220.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-NOV-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAM79574;
                                                                                                                                                                                                                                                 20-JUN-2000;
19-JUL-2000;
                                                                                                                                                                                                                                                                                                      05-FEB-2001; 2001WO-US004098.
                                                                                                                                                                                                                                                                                                                           09-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                 WO200157190-A2
                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                         nervous system disorder; arthritis;
                                                                                                                                                                                                        30-NOV-2000;
                                                                                                                                                                                                                  20-OCT-2000;
                                                                                                                                                                                                                                       01-SEP-2000;
                                                                                                                                                                                   (HYSE-)
                                                                                                                                                                                                                            L5-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    invention relates to reagents and methods for detecting diseases gastrointestinal (GI) tract. The method involves detecting the
                                                                                                                                      Y, Zhao QA, AJ, Yang Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                  HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RLOKSOSSDLLERERESVLRREQEVALERRN 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                     2000US-00496914.
2000US-00560875.
2000US-00598075.
2000US-00620325.
2000US-00654936.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A,
                                                                                                                                                                                                                  2000US-00663561.
2000US-00693325.
                                                                                                                                                                                                         2000US-00728422
                                                                                                                                       Wang D, W
Wejhrman
                                                                                                                                   Drmanac RT, and D, Wang J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     67pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 146; DB 8
Pred. No. 1.6e-1
                                                                                                                                        Asundi V, Zh
J, Zhang J,
Goodrich R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                            inflammation.
                                                                                                                                                               Zhou P,
                                                                                                                                                    Ren
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    œ
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                    ্ঘ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                               ř
                                                                                                                                                      Chen
                                                                                                                                                               ú
                                                                                                                                                                Cao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                   Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                      ¥2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

ព្រះព្រះព្រះព្រះជន្ន

밁 δ

```
RESULT 10
AAW79676
ID AAW79676
AC AAW79
XX AAW79
XX AAW79
XX GAST
XX G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                    This sequence represents the human CS198 protein which is used in a method to detect the presence of a target CS198 polymucleotide in a tensample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be used in detecting, diagnosing, staging, monitoring, prognosticating, preventing or treation determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oesophagus, gastric ulcer, gastritis, lelomyoma, polyps, Crohn's disease, ulcerative colitis, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoiesis regulating activity, tissue growth factor activity, immunomodulatory activity and activin/inhibin activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and inflammation. Note: Records for SEQ ID NO 2110 (AAKS2581) 2111 (AAKS2582) and 3666 (AAM80020) are omitted as the relevant pages from the sequence listing were missing at the time of publication
                                                                                                                                                                                                                                                                                                                                                                                                                                        New gastrointestinal polynucleotides, CS198, and their detection - for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastriti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Granados EN,
Roberts-Rapp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gastrointestinal tract; GI tract; cancer; disease; detection; CS19 human; predisposition; treatment; Barret's oesophagus; gastric ulc gastritis; leiomyoma; polyps; Crohn's disease; ulcerative colitis;
                                                                                                                                                                                                                                                                                                                                                                                Claim 26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1998-542714/46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Billing-Medel PA, Cohen M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        08-OCT-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9844159-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pancreatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human CS198 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11-JAN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAW79676 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (ABBO )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 RIOKSOSSDLIERERESVIRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RLQKSQSSDLLERERESVLRREQEVAEERRN 560
                                                                                                                                                                                                                                                                                                                                                                                Page 100-102; 127pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ľ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hayden M,
L, Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97US-00828855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98WO-US006251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  M, Colpitts TL,
Hodges SC, Klass
JC, Stroupe SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 146; DB 4;
Pred. No. 5.7e-11;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₹,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Friedman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kratochvil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 672;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ŗ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gordon
                                                                                                                                                                                                                                                                                                                                                                                                                                           gastritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                         treating
                                                                                                                                                                                                                                                                                  l a test
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

Query Match

100.0%;

Score 146;

멂

2;

Length 679;

The invention relates to a method of detecting the presence of a target CS 198 polynucleotide comprising contacting the test sample with at least one CS 198-specific polynucleotide. The method is useful for detecting diseases of the gastrointestinal (GI) tract organs, particularly cancer. The CS 198 polynucleotides, polypeptides and antibodies are useful for detecting, diagnosing, staging, monitoring, prognosticating, preventing, treating or determining predisposition to diseases and conditions of the GI tract such as cancer, gastric ulcer, gastritis, Crohn's disease, ulcerative colitis, pancreatitis and Barret's oesophagus. The CS 198 polypeptides are useful as standards or reagents in diagnostic

Sequence 679

₹

```
RESULT 111
AABO7319
ID AABO7319
IT AABO7319
XX AABO7
XX AABO7
XX AABO7
XX CS 19
IT O6-NO
XX Human
XX CS 19
IT Wisc-
PT Misc-
PT M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity
Matches 31; Conserv
                                                                                                                                                                                                                                                                                          Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, comprise contacting test sample with at least one CS 198-specific polynucleotide.
                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-496163/54.
N-PSDB; AAD13637.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Billingel PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CS 198; gastrointestinal tract disease; GI tract; cancer; gastric gastritis; Crohn's disease; ulcerative colitis; pancreatitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAE07319;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAE07319
                                                                                                                                                                                                                                                Claim 17; Page 49-51; 68pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Granados EN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (GORD/)
(GRAN/)
(HAYD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Barret's oesophagus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human CS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (HODG/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (COLP/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US2001010904-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KRAT/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COHE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GORDON J.
GRANADOS E N.
HAYDEN M.
HODGES S C.
KLASS M R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KRATOCHVIL J I
ROBERTS-RAPP I
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COLPITTS T L. FRIEDMAN P N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BILLINGEL P A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COHEN M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RLQKSQSSDLLERERESVLRREQEVAEERRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              198 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard; protein; 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RLOKSOSSDLLERERESVLRREQEVAEERRN 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             t, Cohen
Hayden
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97US-00828855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98US-00050516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "Encoded by CGGN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Z Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene therapy; drug screening; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Colpitts TL, Friedman Hodges SC, Klass MR, JC, Stroupe SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Friedman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5.8e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PN, Gordon J;
Kratochvil JD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

0

```
RESULT 12
AAM78590
   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                           03-FEB-2000; 2000US-00496914.
27-APR-2000; 2000US-00560875.
20-JUN-2000; 2000US-00598075.
19-JUL-2000; 2000US-00620325.
01-SEP-2000; 2000US-00654936.
15-SEP-2000; 2000US-006639325.
20-CCT-2000; 2000US-00693325.
30-NOV-2000; 2000US-00728422.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            immunoassays, as components or as target sites for various therapies. Antibodies directed against at least one epitope contained within these polypeptides are useful as delivery agents for therapeutic agents, in diagnostic tests and for screening for conditions or diseases associated with CS 198, particularly cancer. Monoclonal antibodies may also be used for the generation of chimeric antibodies for therapeutic use. The CS 198 polynucleotide is also useful in gene therapy and drug screening. The method of the invention provides an alternative, non-surgical diagnostic method capable of detecting early stage GI tract disease such as cancer. The present sequence is human CS 198 polypeptide
                                                                                                                                                                                                      Tang YT,
Ma Y, Z
Xue AJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human protein SEQ ID NO 1252.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAM78590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAM78590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 679 AA;
The invention relates to polynucleotides (AAKS1456-AAKS3435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or
                                                                                                                                                                                                                                                                                                                                                                                                                                                           09-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                              05-PEB-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200157190-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; cytokine; cell proliferation; cell differentiation; gene the vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorder; arthritis; inflammation.
                                                                                                                 Nucleic acids encoding polypeptides with cytokine-like activities, useful in diagnosis and gene therapy.
                                                                                         Claim 20;
                                                                                                                                                             N-PSDB; AAK51723.
                                                                                                                                                                                                                                                                  (HYSE-)
                                                                                                                                                                                                   YT, Liu C, Drmanac I
, Zhao QA, Wang D, V
AJ, Yang Y, Wejhrman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     537
                                                                                                                                                                           2001-476283/51.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                  HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RLQKSQSSDLLERERESVLRREQEVAEERRN 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                                                       Page 3512-3514; 6221pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
llarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                2001WO-US004098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein;
                                                                                                                                                                                                                     RT,
Wang
                                                                                                                                                                                                         'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 146; DB 4;
Pred. No. 5.8e-11;
                                                                                                                                                                                                       Asundi V, Zho
g J, Zhang J,
Goodrich R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                    Zhou
                                                                                                                                                                                                                        Ren
                                                                                                                                                                                                                                      ۳,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                        Ψ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                      ž
                                                                                                                                                                                                                        u C,
Chen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             679;
                                                                                                                                                                                                                        R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                        Y;
Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                          WZ,
```

6

Claim

17;

Page

49-50; 67pp; English

Detecting the presence of a target CS198 polynucleotide in a test sample comprises contacting the sample with a CS198 specific polynucleotide and detecting the presence of the target CS198 polynucleotide in the test

The invention describes a method of detecting

the

presence

of a target

```
RESULT 13
ADA26379
ID ADA26
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
Query Match
Best Local S
Matches 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoiesis regulating activity, tissue growth factor activity, immunomodulatory activity and activin/inhibin activity and may be useful in the diagnosis and/or
                                                                                                                                                                                                                                                                                                                                                                                              cancer prognosticating; cancer pagastrointestinal tract disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     treatment of cancer, leukaemia, nervous system disorders, arthritis and inflammation. Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666 (AAM80020) are omitted as the relevant pages from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                      01-MAY-2003
                                                                                                                                                                                                                                                                                                                                                         US2003082619-A1
                                                                                                                                                                                                                                                                                                                                                                                                                  CS198; cancer diagnosis; cancer staging; cancer monitoring;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Predicted amino acid sequence of the CS198 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADA26379;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADA26379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence listing were missing at the time
                                                                                                                 Billingel PA,
Granados EN,
                                                                                                                                                                                                                                                                                      30-MAR-1998;
                                                                                                                                                                                                                                                                                               31-MAR-1997;
                                                                                                                                                                                                                                                                                                                  23-OCT-2002; 2002US-00278547
                                                                                                       Roberts-Rapp L,
                                                                                                                                                        (ROBE/
                                                                                                                                                                                   (KLAS/
                                                                                                                                                                                                                           (GORD/
                                                                                                                                                                                                                                              (COLP/)
                                                                                                                                                                                                                                   (FRIB/)
                                                                                                                                                                                               (HODG/
                                                                                                                                                                                                        (HAYD/
                                                                                                                                                                                                                  (GRAN/
                                                                                                                                                                            KRAT.
                                                                                      2003-596961/56.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31;
                                                                                                                                                                                             COHEN M.
COLPITTS T L.
FRIEDMAN P N.
GORDON J.
GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
                                                                                                                                             ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                 BILLINGEL P
                                                                                                                                                                           KLASS M R.
KRATOCHVIL J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RLOKSOSSDLLERERESVLRREQEVAEERRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            679 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                        Hayden MA,
L, Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                      9803-00050516
                                                                                                                                                                                                                                                                                                97US-00828855.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                  ۲.
                                                                                                                                                                                                                                                                                                                                                                                                         cancer prevention;
                                                                                                       Colpitts TL,
Hodges SC,
1 JC, Stroupe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 146; DB 4;
Pred. No. 5.8e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                gene therapy.
                                                                                                         Klass
SD;
                                                                                                                  Friedman
Klass MR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of publication
                                                                                                                                                                                                                                                                                                                                                                                                          cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                    PN, Gordon
Kratochvil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                    មូដ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

99999999999988

밁 ş

0

```
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Matcr
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CS198 polynucleotide in a test sample. The method comprises contacting the test sample with at least one CS198 specific polynucleotide or its complement, and detecting the presence of the target CS198 polynucleotide in the test sample, where the CS198-specific polynucleotide has at least 50% identity to a polynucleotide having any of the 27 fully defined sequences of 34-2894 bp (S1-27) given in the specification, or their fragments or complements. The composition and methods are useful in diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition of an individual to, diseases and conditions of the gastrointestinal tract, e.g. cancer and in gene therapy. This is the predicted amino acid sequence of the human CS198 protein derived from the CS198 consensus sequence shown in seq id 27.
The present invention relates to human NC1, NC2 and NC3 proteins and coding sequences (ADG14340-ADG14345). The coding sequences are useful for detecting and screening proliferative insulin-producing cells as well as differentiation and proliferation of such cells and their precursors as analogous cells in treatment of e.g. PHHI and diseases due to differentiation/proliferation abnormality, diseases of the nervous system and pancreas. The coding sequences are also useful as spontaneous proliferation models of pancreas beta-cells. The novel genes NC1, NC2 and NC3 were isolated from the pancreas of PHHI patients, which were used in testing for the detection of proliferative insulin-producing cells or pancreas beta-cells by Northern analysis.
                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; SEQ ID NO 2; 34pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    patient-expressed genes for detecting and scr
insulin-producing cells in treatment of PHHI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Familial persistent hyperinsulinemic hypoglycemia of infancy (PHHI) patient-expressed genes for detecting and screening e.g. proliferat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2003-767524/72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Niwa H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-MAR-2002; 2002JP-00071592.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            06-MAR-2003; 2003WO-JP002620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-SEP-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO2003078631-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         neuroprotective.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; NC1; NC2; NC3; PHHI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26-FEB-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADG14341;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADG14341 standard; protein; 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 679 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (KANF )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      537 RLOKSOSSDILERERESVIRREQEVAEERRN 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADG14344.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KANEKA CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Yamashita K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          pancreas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 146; DB 6;
Pred. No. 5.8e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          beta-cell; insulin; antidiabetic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

Sequence 679

Query Match

100.0%;

Score 146;

띪 8

Length 679;

```
RESULT 15
ADMITTAL
AD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                The invention relates to reagents and methods for detecting diseases of the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polymucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of diseases or conditions associated with aberrant expression or activity of the CS198 polympetide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 protein used to illustrate the method of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31-MAR-1997;
30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADN17172 standard; protein; 679 AA.
  Sequence 679
                                                                                                                                                                                                                                                                                                                                               Diagnosing diseases such as cancer of the gastrointestinal tract, detecting aberrant expression or activity of the CS198 polypeptid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US2004043406-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gastrointestinal tract; GI tract; CS198; cancer; gene therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CS198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADN17172
                                               present sequence invention.
                                                                                                                                                                                                                                                                            Claim 17; SEQ ID NO 42; 67pp; English
                                                                                                                                                                                                                                                                                                                              associated treatment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Billingel PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (KCLAS/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                  GENBANK; D87440
                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2004-313754/29.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Roberts-Rapp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Granados
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (COLE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22-AUG-2003; 2003US-00646873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (HAYD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (GRAN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (FRIE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (BILL/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ROBE/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KRAT/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ROBERTS-RAPP RUSSELL J C. STROUPE S D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BILLINGEL P A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COLPITTS T L. FRIEDMAN P N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KLASS M R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COHEN M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RLQKSQSSDLLERERESVLRREQEVAEERRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RLOKSOSSDLLERERESVLRREQEVAEERRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŗ
    ₹,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cohen
Hayden
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97US-00828855
98US-00050516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₹.₹
                                                                                                                                                                                                                                                                                                                                 methods.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Colpitts TL,
Hodges SC,
JC, Stroupe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 146; DB 7;
Pred. No. 5.8e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Klass MR,
SD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Friedman PN, Gordon
Klass MR, Kratochvil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                      polypeptide, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 មូដ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                            γď
```

Best Local Similarity 100.0%; Pred. No. 5.8e-11; Matches 31; Conservative 0; Mismatches 0; Indels '0; Gaps

0,

Search completed: March 3, 2006, 13:35:22 Job time: 18.5695 secs

ש
ы
Ö
ge

Control of the soul of the sou

```
Regult
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed
and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
                                                                                                                                                                                                                                              57.5
56.5
56.5
54.5
54.5
54.5
54.5
                                                                                                                                                                                   53.5
                                                                            52.5
52.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein search, using sw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-646-873-44
146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  March
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            283416 seqs, 96216763 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0
                                     PIR_80:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenCore version 5.1.7 Copyright (c) 1993 - 2006 Biocceleration Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                pir2:*
pir3:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            pir4:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       pirl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3, 2006, 13:26:31 ; Search time 1.95821 Seconds (without alignments)
1523.185 Million cell updates/sec
                                                           1017
352
856
1407
1891
1991
1992
1069
1898
258
321
1039
1738
1738
1738
1738
1738
1738
1738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       first 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Match
                                       T10636
AC0136
AC013698
T115598
T115598
T13881
S28589
S28589
S28589
S28589
S28589
S28589
S28589
S28589
T13893
T13893
T15895
T15885
T1588
T15885
T15885
T15885
T15885
T15885
T15885
T15885
T1588
T1588
T1588
T1588
T1588
T158
E70942
D83077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mode1
                                                                                                                                         ribonuclease PH (r
IGE Fc receptor II
hypothetical prote
two-component sens
hypothetical prote
hypothetical prote
hypothetical prote
interaptin - slime
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hypothetical prote probable DNA-J-lik
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Description
                   conserved hypothet
gag polyprotein -
hypothetical prote
                                                                                     myosin X
                                                                                                    hypothetical prote
hypothetical prote
                                                                                                                                                                                                                                                                                                                KIAA0642 protein -
trichohyalin - hum
                                                                                                                                                                                                                                                                                                                                                                           gene hindsight pro
processing peptida
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  trichohyalin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hypothetica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             hypothetical prote
                                                                                                                                                                                                                                                                                                                                                                                                                    nypothetical prote
                                                                                                                                                                                                                                                                                                                                                         mbryogenic callus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           shock
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     family prote
bhyalin - rab
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein
                                                                                   mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   prote
```

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	. 30
51	51	51	51	51	51	51	51	51	51	51	51	51	51	51.5	51.5
34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	35.3	35.3
988	964	964	857	798	790	646	457	453	419	270	268	226	142	599	456
N	'n	N	N	N	N	N	N	N	N	N	N	N	N	N	N
E81541	D72131	G86491	AI0831	T25104	S27458	T49654	T50402	T42428 ·	JC7863	T24126	T24118	T24125	JC5612	T51548	T05612
hypothetical proce		77	_	'n	_	TT	probable micochon	mitochondrial pro	- 1	chetical pr			1	nypotnetical proce	

### ALIGNMENTS

C;Accession: T00636

R;Lamerdin, J.E.; McCready, P.M.; Skowronski, E.; Adamson, A.W.; Burkhart-Schultz, K.; (R;Lamerdin, J.E.; McCready, P.M.; Skowronski, E.; Adamson, A.W.; Burkhart-Schultz, K.; (resecuence continuation)

submitted to the EMBL Data Library, January 1998

submitted to the EMBL Data Library, January 1998

A;Description: Sequence analysis of a 3.5 Mb contig in 19p13.3 between CDC34 and D19834;

A;Reference number: Z14195

A;Reference number: Z14195

A; Molecule type: DNA A; Residues: 1-679 <LAM>

Status: preliminary; translated from GB/EMBL/DDBJ

hypothetical protein F21856\_2 - human C;Species: Homo sapiens (man) C;Date: 01-Feb-1999 #sequence\_revision 01-Feb-1999 #text\_change 09-Jul-2004

RESULT 1 T00636

```
deno-larry,
il, M.; Rutherford, K.; Sınmouw,
Nature 413, 523-527, 2001
A;Title: Genome sequence of Yersinia pestis,
A;Title: Genome sequence, MUID:21470413; P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             heat shock protein GrpE [imported] - Yersinia pestis (strain CO92)

C;Species: Yersinia pestis
C;Species: O2-Nov-2001 #sequence_revision 02-Nov-2001 #text_change 09-Jul-2004
C;Date: 02-Nov-2001 #sequence_revision 02-Nov-2001 #text_change 09-Jul-2004
C;Accession: AC0136
C;Accession: AC0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 2
AC0136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Introns: 594/1; 637/3; 650/3
A;Note: F21856_2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                  A; Gene: YPO1107
C; Superfamily:
                                                                                                                                                                                                         A;Cross-references: UNIPROT:Q8ZH08; UNIPARC:UPI0000DCC53; GB:AL590842; PIDN:CAC89950.1
                                                                                                                                                                                                                                                            A; Molecule type: DNA
A; Residues: 1-192 < KUR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Map position: 19p13.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: UNIPROT:Q8IVT2;
                                                                                                                                                                                                                                                                                                                                               A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
Query Match
                                                                                                                                                                         Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                     YP01107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               heat shock protein grpE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; ilarity 100.0%; ilarity 100.0%; ilarity 0;
    45.2%;
    Score 66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 146; DB 2;
Pred. No. 1.1e-09;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               UNIPARC: UPI00000745CD; EMBL: AC004030; NID: 92804590;
                                                                                                                                                                                                                                                                                                                                                                                                                                          3, the causative PMID:11586360
         멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        567
         2
         Length 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    agent of plague.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
R; Pavello, T.
submitted to the EMBL Data Library, October 1995
submitted to the EMBL Data Library, October 1995
constitution: The sequence of C. elegans cosmid C25All.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Favello, T.

submitted to the EMBL Data Library, October 1995

submitted to the sequence of C. elegans cosmid C25A11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                   probable DNA-J-like protein - fission yeast (Schizosaccharomyces pombe) C;Species: Schizosaccharomyces pombe C;Dsecies: Schizosaccharomyces pombe C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 09-Jul-2004 C;Accession: T38881
                                                                                                                                                                                            밁
                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                              A;Residues: 1-1017 <FAV>
A;Cross-references: UNIPARC;UPI000017B7BA; EMBL:U39650; NID:g1049376; PID:g1049380; PIDN
A;Crossimental source: strain Bristol N2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hypothetical protein C25All.4a - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 20-Sep-1999 #sequence_revision 20-Sep-1999 #tex:C;Accession: T15598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: UNIPARC:UPI000017B7BB;
A;Experimental source: strain Bristol N2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Description: The sequence
A;Reference number: Z18375
A;Accession: T15597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hypothetical protein C25A11.4b - (;Species: Ceenorhabditis elegans C;Bate: 20-Sep-1999 #sequence_rev. C;Accession: T15597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                         T38881
                                                                                                                            RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Description: The sequence
A;Reference number: Z18375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            T15598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Molecule type: DNA
A;Residues: 1-737 <FAV>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Status: preliminary; translated from GB/EMBL/DDB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Accession: T15598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 16
                                                                                                                                                                                                                                                                                                                                                              Introns:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gene:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local
                                                                                                                                                                                                                                                                                                                                                                                                     Genetics:
                                                                                                                                                                                                                                                                                                                                        CESP:C25All.4a
nm: 65/3; 88/3; 126/3; 433/2; 494/2; 711/2; 735/1; 792/3; 833/3; 873/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CESP:C25All.4b
ns: 65/3; 88/3; 126/3; 433/2; 494/2; 711/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               556
                                                                                                                                                                                            556 EEAQLADLLERERHNQLIRENERREAVERAN 586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              45
                                                                                                                                                                                                                                                                               16;
                                                                                                                                                                                                                                   w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 QKSQSSDLLERERESVLRREQEVAE--ERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6 QSSDLLERERESVLRREQEVAEERR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
15; Conserv
                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EEAQLADLLERERHNQLIRENERREAVERAN 586
                                                                                                                                                                                                                                   QKSQSSDLLERERESVLRREQEVAE -- ERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #sequence_revision 20-Sep-1999 #text_change 20-Sep-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #sequence_revision 20-Sep-1999 #text_change 20-Sep-1999
  D.; Barrell,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  42.5%;
51.6%;
                                                                                                                                                                                                                                                                        42.5%; Score 62; DB 51.6%; Pred. No. 13; tive 5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 62; DB
Pred. No. 9.3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. 0.82;
3; Mismatches
B.G.; Rajandream,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL: U39650;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2;
                                                                                                                                                                                                                                                                                                                    2
                                                                                                                                                                                                                                                                           8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 737;
                                                                                                                                                                                                                                                                                                                    Length 1017
  M.A.; Walsh,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NID:g1049376; PID:g1049381; PID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                           2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>ب</u>
  S.V.
                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                             ļ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ۲.
                              A; Molecule type: DNA
A; Molecule: 1-1407 <FIE>
A; Residues: 1-1407 <FIE>
A; Cross-references: UNIPROT: P37709; UNIPARC: UPI000013738C; EMBL: Z19092; NID: g1746; PIDN:
A; Cross-references: UNIPROT: P37709; UNIPARC: UPI00013738C; EMBL: Z19092; NID: g1746; PIDN:
C; Comment: Trichohyalin is a protein of the medulla of the hair and of the inner root sh
C; Comment: modifications to this protein include conversion of arginine to citrulline and
                                                                                                                                                                                                             R;Fietz, M.J.; Rogers, G.E. submitted to the EMBL Data Library, December 1992 A;Description: Examination of the gene encoding x
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
  A; Introns: 46/3
C; Superfamily: trichohyalin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                  S28589
                                                                                                                                                                          A;Accession: S28589
                                                                                                                                                                                       A; Reference number: S28589
                                                                                                                                                                                                                                                                                                                                            trichohyalin - rabbit
                                                                                                                                                                                                                                                                           Accession: S28589
                                                                                                                                                                                                                                                                                              Species: Oryctolagus cuniculus (domestic rabbit); Date: 12-Mar-1993 #sequence_revision 01-Mar-1996;
```

```
A;Gene: 1
A;Map po:
                                                                                                                                                                                                                                                                                                                                                                                                      C;Accession: E75292
C;Accession: E75292
R;White, O.; Eisen, J.A.; Heidelberg, J.F.; Hickey, E.K.; Peterson, M.; Shen, M.; Vamathevan, J.J.; Lam, P.; McDonald, L.; Utterback, M.; Shen, M.; Vamathevan, J.C.; Fraser, C.M.
                                                                                                                                                                                                                                                                                                                                                                                   S.; Smith, H.O.; Venter, J.C
Science 286, 1571-1577, 1999
A;Title: Genome sequence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGDEF family protein - Deinococcus radiodurans (strain R1)
C;Species: Deinococcus radiodurans
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Introns: 29/2; 53/3; 277/2
F;8-74/Domain: dnaJ amino-terminal homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              submitted to the EMBL Data Library, February A_i;Reference number: Z21807
                                                                                                                                                                                                                                                         A;Cross-references: UNIPROT:Q9RS28; UNIPARC:UPI00000D3F88; A;Experimental source: strain R1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Map position: 1
A; Introns: 29/2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: UNIPROT:Q10209; UNIPARC:UPI000013A191; EMBL:Z69380; PIDN:CAA93340.1; A;Experimental source: strain 972h-; cosmid c4H3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: DNA
A; Residues: 1-392 < MUR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Reference number: A; Accession: T38881
RESULT 7
                                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                 A_iTitle: Genome sequence of the radioresistant bacterium Deinococcus radiodurans A_iReference number: A75250; MUID:20036896; PMID:10567266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Gene: SPDB:SPAC4H3.01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Status: preliminary; translated
                                                                                                                                                                                                                                                                                             A;Residues: 1-856 <WHI>
                                                                                                                                                                                                                                                                                                                                              A; Accession: E75292
                                                                                                                           Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                 ;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genetics:
                                                                                                                                                                                                                                        Genetics:
                                                                                                                                                                                                    position: 1
                                                                                                                                            Local Similarity
                                                                                                                                                                                                                        DR2299
                                                       351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13
                                                                                                                             14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                            RLQKSQSSDLLERERESVLRREQEVAEERRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RERESVLRREQEVAEERR 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REREALAKREQEMIEDRR
                                                       RLAEQRAGLLAEQIRYEVLRREAELQRKRRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              53/3; 277/2
                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                            41.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               174
                                                                                                                           Score 60; DB:
Pred. No. 19;
6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                             6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 60;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <DNJ:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB
                                                         381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2;.
                                                                                                                                                                 2
                                                                                                                               11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ν
•-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 392;
                                                                                                                                                                 Length
                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                            GB:AE002061;
                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                          J.D.; Dodson,
T.; Zalewski,
                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                              GB:AE000513;
                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                          <u>2</u>2
                                                                                                                                                                                                                                                                                                                                                                                                                                            R.J.; I
C.; Ma)
```

NID

calmodulin repeat homology

rabbit

trichohyalin

#text\_change 09-Jul-2004

Mon

Mar

σ

```
hypothetical protein peb - fruit fly (Drosophila melanogaster)
C;Species: Drosophila melanogaster
C;Date: 13-Aug-1999 #sequence_revision 13-Aug-1999 #text_change 09-Jul-2004
C;Accession: T13594
R;Ferraz, C.; Vidal, S.; Brun, C.; Bucheton, A.; Demaille, J.G.
submitted to the BMBL Data Library, October 1998
A;Description: Sequencing the distal X chromosome of Drosophila melanogaster.
A;Reference number: Z17692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R;Murphy, L.; Harris, D.; Bentley, S.D.; Parkhill, J.; Barrell, B.G.; Rajandream, submitted to the EMBL Data Library, April 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             hypothetical protein SCB15.03c - Streptomyces coelicolor
C;Species: Streptomyces coelicolor
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C; Keywords: calcium binding; citrulline; EF hand; hair; tandem repeat F;49-81/Domain: calmodulin repeat homology <EF2>
gene hindsight protein - fruit fly (Dro
C;Species: Drosophila melanogaster
C;Date: 20-Sep-1999 #sequence_revision
                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            श
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Status: preliminary; translated from GB/EMBL/DDBu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A, Reference number: Z21597
A, Accession: T36106
                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Reference number: A; Accession: T13594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Gene: SCOEDB: SCE15.03c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: UNIPROT:Q9X878;
A;Experimental source: strain A3(2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A,Residues: 1-677 <MUR>
                                                                                                                                                                                                                                                                                                                                                                                             A;Residues: 1-1891 <FER>
                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: DNA
                                                                                                                                                                                                               Query Match
Best Local S
Matches 13
                                                                                                                                                                                                                                                                                                          ;Gene: peb
;Cross-references: FlyBase:FBgn0003053
                                                                                                                                                                                                                                                                                                                                                                                                                           Status: preliminary; translated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Accession: T36106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                         Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1153 LOESEEERLRROERERKLREEEQLLQER 1180
                                                                                                                                         1535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 RIQKSQSSDLLERERESVLRR---EQEVAEERRN 31
                                                                                                                                                                           1 RLQKSQSSDLLERERESVLRREQEVAEERR 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   h 39.4%;
Similarity 41.2%;
14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RIEKDRMLEAIGRERETELTRIAAEKEVEAERRD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOKSOSSDILERERESVIRREGEVAEER
                                                                                                                                         RRQEAEREKELELERERELERERELERERQ 1564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40.4%;
ilarity 42.9%;
Conservative
                                                                                                                                                                                                               39.0%;
ilarity 43.3%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                         UNIPROT:077275; UNIPARC:UPI000007C242;
                                        fruit fly (Drosophila melanogaster)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; Score 59; DB:
; Pred. No. 40;
7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 57.5; Di
Pred. No. 29;
8; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8,
                                                                                                                                                                                                                 Score 57; DB Pred. No. 93; 6; Mismatches
                                                                                                                                                                                                                   6
                                                                                                                                                                                                                                                                                                                                                                                                                                   from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UNIPARC: UPI00000DAFFF; EMBL: AL049707; PIDN: CAB41272
    20-Sep-1999 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29
                                                                                                                                                                                                                                                        DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                   11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                        Length 1891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 677;
                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                           EMBL: AL031227; NID: e1330103;
      09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ū
                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1;
                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     M.A.
```

```
RESULT 11
JC6525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;Yip, M.L.R.; Lamka, M.L.; Lipshitz, H.D.

Development 124, 2129-2141, 1997

A;Title: Control of germ-band retraction in Drosophila by the zinc-finger protein HINDSI

A;Reference number: 217807; MUID:97330681; PMID:9187140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R;Zhang, M.; Xie, W.; Leung, G.S.W.; Deane, E.E.; Kwan, H.S. Gene 206, 23-27, 1998
A;Title: Cloning and characterization of the gene encoding beta A;Reference number: JC6525; MUID:98121308; PMID:9461410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              processing peptidase (EC 3.4.-.-) beta chain, mitochondrial - shiitake mushroom C;Species: Lentinula edodes (shiitake mushroom) C;Date: 21-Aug-1998 #sequence_revision 21-Aug-1998 #text_change 07-May-1999 C;Date: 21-Aug-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Description: probably function as a transcription C;Keywords: nucleus; zinc finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Cross-references: UNIPROT: 046205; UNIPARC: UPI0000078995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: mRNA
A; Residues: 1-1920 < Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                        멼
                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                            A;Introns: 13/3 439/3
C;Superfamily: mitochondrial processing peptidase alpha
C;Keywords: hydrolase; mitochondrion; zinc
                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: UNIPARC:UPI0000175DBE
C;Comment: This protein belongs to the pitrilysin family of endoprotease that conserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C; Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: FlyBase:FBgn0003053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Gene: hindsight
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Accession: T13893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C; Accession: T13893
                embryogenic callus protein 98b - carrot
C;Species: Daucus carrota (carrot)
C;Date: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change
                                                                                                                                                                                                                                                                                                                                                                    A; Gene: beta-mpp
                                                                                                                                                                                                                                                                                                                                                                                          C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Residues: 1-466 < ZHA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Accession: JC6525
C; Accession: T14286
                                                                              T14286
                                                                                                RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 13
                                                                                                                                                                                                                                Query Match
Best Local S
Matches 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Genetics:
                                                                                                                                                                                                                              Local Similarity
les 13; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1535
                                                                                                                                                          133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13;
                                                                                                                                                                                            N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JC6525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RRQEAEREKELERERELERERELERERO 1564
                                                                                                                                                                          LOKSQ-SSDLLERERESVLRREQEVAEE 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RLOKSOSSDLLERERESVLRREQEVABERR 30
                                                                                                                                                          LONSKLESGAIERERDVILREQQEVDKQ 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    39.0%;
                                                                                                                                                                                                                                                    38.7%;
                                                                                                                                                                                                                                  7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 57;
Pred. No.
                                                                                                                                                                                                                                                    Score 56.5;
Pred. No. 26;
                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB
95;
                                                                                                                                                                                                                                                                            BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11;
                                                                                                                                                                                                                                                                          ν
•
                                                                                                                                                                                                                                      7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1920
                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                        chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL: U86010;
                                                                                                                                                                                                                                                                              466;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  subunit of mitochondrial
                          09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>,</u>
                                                                                                                                                                                                                                      <u>ب</u>
                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NID:g2769709;
                                                                                                                                                                                                                                        ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PI
```

A;Residues: 1-502 <XUZ> A;Cross-references: UNIPROT:080383; UNIPARC:UPI00000AB396; EMBL:AB012708; NID:g3551256; A;Experimental source: embryogenic callus C;Genetics:

R;Xu, Z.; Ueda, K.; Masuda, K.; Itoh, A.; Ono, M.; Inoue, submitted to the EMBL Data Library, March 1998
A;Description: A novel nuclear protein with a HMG-box fro

from

carrot

3

A;Reference number: T14286 A;Accession: T14286

A;Status: preliminary; translated from GB/EMBL/DDB.

A;Molecule type: mRNA

; Dodson,

```
RESULT 14
A45973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA Res. 5, 169-176, 1998
A;Title: Prediction of the coding sequences of unidentified human genes. X. The complete A;Reference number: Z14142; MUID:98403880; PMID:9734811
A;Accession: T00377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 13
T00377
    밁
                                   १
                                                                                                                                                                      A;Map position: 1q21-1q21
C;Superfamily: trichohyalin; calmodulin repeat homology
C;Keywords: calcium binding; citrulline; EF hand; hair;
                                                                                                                                                                                                                                                                                                                      A; Molecule type: DNA
A; Residues: 1-1898 < LIEE>
A; Cross-references: UNIPROT:007283; UNIPARC:UPI000013738B; GB:L09190; NID:g292835; PIDN:
A; Note: authors translated the codon AGG for residue 1714 as Pro
C; Comment: Trichohyalin is a protein of the medulla of the hair and of the inner root sh
                                                                                                                                                                                                                                                                                                                                                                                                                             C;Accession: A45973
R;Lee, S.C.; Kim, I.G.; Marekov, L.N.; O'Keefe, E.J.; Parry, D.A.D.; Steinert, P.M. J. Biol. Chem. 268, 12164-12176, 1993
A;Title: The structure of human trichohyalin. Potential multiple roles as a function ed (cross-linking) protein.
A;Reference number: A45973; MUID:93280194; PMID:7685034
A;Accession: A45973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: mRNA
A; Residues: 1-1069 <ISH>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Note: 98b-2a7
                                                                                                                                                                                                                                              A;Cross-references: GDB:136223; OMIM:190370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   trichohyalin - human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Gene: KIAA0642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R;Ishikawa, K.; Nagase, T.; Suyama, M.; Miyajima, N.; Tanaka, A.;
DNA Res. 5, 169-176, 1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KIAA0642 protein - human (fragment)
C;Species: Homo sapiens (man)
                                                                                                                                                                                                                                                                   A;Gene: GDB:THH
                                                                                                                                                                                                                                                                                                           Covalent modifications to this protein include conversion of arginine to citrulline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Accession:
                                                                                                                                                              49-81/Domain: calmodulin repeat homology <EF2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Species: Homo sapiens (man)
;Date: 03-May-1994 #sequence_revision 01-Mar-1996 #text_change 09-Jul-2004
;Accession: A45973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Date: 01-Feb-1999 #sequence_revision 01-Feb-1999 #text_change 09-Jul-2004
Accession: T00377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                  Matches
                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
    677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10; Conservative
                                        ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3 QKSQSSDLLERERESVLRREQEVASERR 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      l Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 LOKSOSSDLLERERESVLRREQEVASER 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EERKRQEELRRQQEEILRRQQEEERKRR 550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LEKAKTEEML-KEREEALRRKEEELETR 124
RIKREEEEERIEORIKREHEEE-RREOELAEEEO 709
                                        RLQKSQSSDLLE----RERESVLRREQEVAEERR 30
                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         UNIPROT:075137; UNIPARC:UPI000017C289; EMBL:AB014542; NID:g3327097;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       38.7%;
                                                                                                 37.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   37.7%;
35.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9; Mismatches
                                                                                6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 55; DB Pred. No. 90;
                                                                                                     Score 54.5; DB 1;
Pred. No. 1.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               띪
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1069;
                                                                                                                      Length 1898;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 502;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                 tandem repeat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1;
                                                                                5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ,,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kotani, H.;
                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             functional
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ٠,
                                                                                N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nomura,
```

```
z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Glodek, A.; Zhou, L.; Overbeek, R.; Gocayne, J.D.; Weidman, J.F.; McDonald, L. Nature 390, 364-370, 1997
A;Authors: Utterback, T.; Cotton, M.D.; Spriggs, T.; Artiach, P.; Kaine, B.P.; Sykes, S.N. Smith, H.O.; Wosse, C.R.; Venter, J.C.
A;Title: The complete genome sequence of the hyperthermophilic, sulfate-reducing archaeor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R;Klenk, H.P.; Clayton, R.A.; Tomb, J.F.; White, O.; Nelson, K.E.; Ketchum, K.A.; D.; Fleischmann, R.D.; Quackenbush, J.; Lee, N.H.; Sutton, G.G.; Gill, S.; Kirkness, Glodek, A.; Zhou, L.; Overbeek, R.; Gocayne, J.D.; Weidman, J.F.; McDonald, L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ribonuclease PH (rph) homolog - Archaeoglobus fulgidus
C;Species: Archaeoglobus fulgidus
C;Date: 05-Dec-1997 #sequence_revision 05-Dec-1997 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                              A;Cross-references: UNIPROT:029757; UNIPARC:UPI00000570BB; GB:AE001070; GB:AE000782; NIDC;Superfamily: tRNA nucleotidyltransferase
Search completed: March Job time : 3.95821 secs
                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Reference number: A69250; MUID:98049343; PMID:9389475 A;Accession: E69311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E69311
                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                     A;Residues: 1-258 <KLE>
                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                   A; Status: preliminary; nucleic acid sequence not shown; translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Accession: E69311
                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                            Matches
                                                                                                                                                                                                         Local Similarity hes 12; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15
                                                                                                    221 LAKKGALQIYEMQREAILRRYIEVGEE 247
                                                                                                                                                        N
                                                                                                                                                   LOKSOSSDLLERERESVLRREQEVALE 28
                                                                                                                                                                                                            Conservative
                        Ψ
                                                                                                                                                                                                                                     44.48;
                                                                                                                                                                                                                                                             37.0%;
                        2006,
                                                                                                                                                                                                            υı
--
                        13:36:33
                                                                                                                                                                                                         Pred. No. 28;
5; Mismatches
                                                                                                                                                                                                                                     Score 54; DB
Pred. No. 28;
                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                             <u>ب</u>
                                                                                                                                                                                                            10;
                                                                                                                                                                                                                                                          Length 258;
                                                                                                                                                                                                            Indels
                                                                                                                                                                                                         ٥,
                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                            0
```

€

```
Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Regult
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Total number of hits satisfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score
                                                                                                                                                                                                                                                                                                                                                                    146
142
136
66
63.5
                                                                                                                                                                                                        60.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       seq length: 0 seq length: 2000000000
      999999999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein search, using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-646-873-44
146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            March
                               2166443 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   UniProt_05.80:*
1: uniprot_sprot:*
2: uniprot_trembl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RLQKSQSSDLLERERESVLRREQEVAEERRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3, 2006, 13:19:17;
                                 Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 705528306 residues
                                                                                                                                                                                        CS021_HUMAN
CS021_PONPY
CS021_PONPY
CS021_PONPY
CS021_PONPS
GRPE_TERPE
Q66DA8 YERPE
Q66DA8 YERPE
Q66UM6_YARLI
Q7NL34 GLOVI
Q7NL34 GLOVI
Q7NL34 GLOVI
Q6MYY9_ASPFU
Q4WSM1_ASPFU
Q4WSM1_ASPFU
Q48SY7_CAEEL
Q8MQC7_CAEEL
Q8MQC7_CAEEL
Q18138_CAEEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   chosen parameters:
Q9RSZB DEIRA
Q62704 PIG
Q62706 PIG
Q5QGQ9 9GAMR
Q6UJZ5 9GAMR
Q6UJZ5 9GAMR
Q6UJZ5 9GAMR
Q9QRMO 9GAMR
Q9QRMO 9GAMR
Q4VFZ 9GAMR
Q4VFZ 9GAMR
NOL10 BRARE
TRHY RABIT
Q4T6B2_TETNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₩B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Search time 11.8397 Seconds (without alignments)
1847.299 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2166443
                                                                                                                                                                                           08ivt2
05rbi
09d279
07ch40
06c6dae
06c1w6
07n134
07m134
018137
0582w2
095zy7
018138
095zy7
0486v2
0486v2
0486v2
    Q8q6u8
Q90rm0
Q4vfz3
Q802w4
P37709
Q4t6b2
                                                                                         Q9rs28
062704
062706
062706
Q5qgq9
Q6t3v4
Q6ujz3
Q6ujz5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Description
                                                                                                                                                                                                                                                                                                            2 homo sapien
3 pongo pygma
3 pongo pygma
9 mus musculu
0 yersinia pe
8 yersinia pe
6 yarrowia li
4 gloeobacter
9 aspergillus
1 aspergillus
7 caenorhabdi
    porcine end
porcine end
porcine end
porcine end
porcine end
porcine end
porcine end
porcine end
porcine end
porcine end
porcine end
porcine end
porcine end
                                                                                                                                                                                           tetraodon n
schistosoma
vaccinia vi
schizosacch
                                                                                                                                                                                                                                                     caenorhabdi
caenorhabdi
                                                                                                                                                                                                                                                                                  trypanosoma
caenorhabdi
                                                                                                                                                   sus scrofa
                                                                                                                                                               deinococcus
sus scrofa
```

Ó	Z	Ħ	Ĥ	H	i i	ם כ	יט נ כ	ESI																	
Ë	Nam	Pro	13-	13-	13-		NAMOH TZOS	ESULT 1		45	44	43	42	41	<b>4</b> 0	9	38	37	36	35	34	ω ω	32		
Homo ganiens (Human)	Name=C19orf21;	Protein C19orf21	13-SEP-2005	13-SEP-2005	13-SEP-2005	OBIVES:	MAN			57.5	57.5	58	58	58	58	58	58	58.5	•	•	58.5	•	•		
a (Hijma	21;	orf21.	(Rel.	(Rel.	(Rel.	015	9			39.4	39.4	39.7	39.7	39.7	39.7	39.7	39.7	40.1	40.1	40.1	40.1	40.1	40.1		
<u>.</u>			48,	48,	48,	SIANDARD;				20	154	92	876	337	228	160	101	908	908	807	527	472	280		
			Last	Last	Created)	9	Š					2 2													
					at ec																				
			annotation update)	sequence update)	7	FAL,			ALIGNMENTS	ATI3_VACCV	Q80HV0_9POXV	Q9W1T9_DR	Q6NNX1 DR	Q87QQ2_VIBPA	Q5DCN5_SCHJA	Q5C3D5_SCHJA	26AI70_DE	9LVX1 AR	Q8W4G4_ARATH	Q6P9Z2_BRARE	Q8MS78_DROME	Q4RQU7_TETNG	Q4RG63_TETNG		
			update)	ipdate)		20.	679 DA		ENTS	Α.	VXV	DROME	OMB	BPA	HJA	HJA	SPS	ATH	ATH	ARE	OME	TNG	TNG		
					•					P21117	Q80hv0	-	_	Q87qq2	٠.	Q5c3d5	Q6ai70		,,,	Q6p9z2	Q8ms78	Q4rqu7	Q4rg63		
										vaccinia vi	vaccinia vi	drosophila	drosophila	vibrio para	schistosoma	schistosoma	desulfotale	arabidopsis	arabidopsis	brachydanio	drosophila	tetraodon n		•	

DR D	CCCCCCCRTT RABBARABARABARARARARARARARARARARARARARA	RESULT CS021 ID C AC Q DT 1
EMBL; BC042125; AAH42125.1; -; mRNA. EMBL; BC052236; AAH52236.1; -; mRNA. PIR; T00636; T00636. Ensembl; ENSG0000099812; Homo sapiens. HGNC; HGNC:27000; C19orf21. Colled coil. COLLED 545 569 Potential. COLLED 545 569 Potential. SEQUENCE 679 AA; 75357 MW; D2881CF5087E61F8 CRC64;	2005 (Rel. 48, Last sequence 2005 (Rel. 48, Last anno Clayorf21; piens (Human). ta; Metazoa; Chordata; Ca; Eutheria; Euarchontog xID=9606; Peins Colins F.S., Walls, and Colon; Peinsold E.A., Peinsold E.A., Warusina K., Faron M.J., Jordan H., Moore R.F., Jordan H., Moore R.F., Jordan H., Moore R.F., Wallson N.A., Pet R.F., Jordan N.A., Pet R.F., Warny D.M., Sode N.M., Sode N., Sode N., Sode N., Sode N., Sohein J.E., Jones tield Y.S.N., Krzywinski gled Y.S.N., Krzywinski gled CNA sequences.", Jatl. Acad. Sci. U.S.A. 1009 as its content is illong as its content is ill.	T 1 CHUMAN CESO21 HUMAN STANDARD; DBIVTZ; 13-SEP-2005 (Rel. 48, Creat

```
CS021_M 3
CS021_M 3
CS021_D CS021
D CS020
D CS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21 PONPY STANDARD;

GS021 PONPY STANDARD;

GSRBH3;

OSRB+3;

13-SEP-2005 (Rel. 48, Last

13-SEP-2005 (Rel. 48, Last

13-SEP-2005 (Rel. 48, Last

Protein Cl9orf21 homolog.
                    NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].

NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].

MEDLINE=22354683; PubMed=12466851; DOI=10.1038/nature01266;

Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo S.,

Okatoki V., Bono H., Kiyosawa H.,

Nikaido I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa H.,

Yagi K., Tomaru Y., Hasegawa Y., Nogami A., Schonbach C., Gojobori T

Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J.,

Baldarelli R., Kanapin A., Matsuda H., Batalov S., Beisel K.W.,

Blake J.A., Bradt D., Brusic V., Chothia C., Corbani L.E., Cousins S

Dalla E., Dragani T.A., Fletcher C.F., Forrest A., Frazer K.S.,

Gassterland T., Gariboldi M., Gissi C., Godzik A., Gough J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CS021 MC
Q9D279;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13-SEP-2005 (Rel. 48, Created)
13-SEP-2005 (Rel. 48, Last sequence update)
13-SEP-2005 (Rel. 48, Last annotation updat
Protein C19orf21 homolog.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pongo pygmaeus (Orangutan).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=10090
                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
Muroidea; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COILED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; CR858675; CAH90887.1; -; mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The German cDNA consortium;
Submitted (NOV-2004) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                         musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TaxID=9600;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      co11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ropean Bioinformatics Institute. There are no restrictions of a sits content is in no way modified and this statement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RLOKSOSSDLLERERESVLRREREVAEERRN 573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RLQKSQSSDLLERERESVLRREQEVAEERRN 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              685 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97.3%;
96.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              75892 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 142; DB 1;
Pred. No. 4.5e-08;
1; Mismatches (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 146; DB 1;
Pred. No. 1.5e-08;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Potential.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A3A99F4343396E81 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ጅ
     Jackson I.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 685;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                      Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
```

RESULT 4
GRPE\_YERPE

ga g

GRPE YERPE STANDARD; Q7CH40; Q74W49; Q8ZH08; 25-OCT-2004 (Rel. 45, Created)

192

\$

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RA Kanai A., Kawaji H., Kawasawa Y., Kedzierski R.M., King B.L.,

RA Magaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A.,

RA Magashima T., Nantais L., Marchionni L., McKenzie L., Miki H.,

RA Nagashima T., Numata K., Okido T., Pavan W.J., Pertea G., Pesole G.,

RA Petrovsky N., Pillai R., Pontius J.U., Qi D., Ramachandran S.,

RA Ravasi T., Reed J.C., Reed D.J., Reid J., Ring B.Z., Ringwald M.,

RA Sandelin A., Schneider C., Semple C.A., Setou M., Shimada K.,

RA Sultana R., Takenaka Y., Taylor M.S., Teasdale R.D., Tomita M.,

RA Verardo R., Wagner L., Wahlestedt C., Wang Y., Watanabe Y., Wells C.,

RA Wilming L.G., Wynshaw-Boris A., Yanagisawa M., Yang I., Yang L.,

RA Yuan Z., Zavolan M., Zhu Y., Zimmer A., Carninci P., Hayatsu N.,

RA Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,

RA Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,

RA Miyazaki A., Sakai K., Sasaki D., Shibata K., Shinagawa A.,

RA Miyazaki A., Sakai K., Sasaki D., Shibata K., Shinagawa A.,

RA Miyazaki A., Yoshino M., Waterston R., Lander E.S., Rogers J.,

RA Nirney R. Hayashirahi V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RX. SERVINEE-22388257; Pubmedeil2477932; DOI=10.1073/pnas.242603899; RX KIRDLINEE-22388257; Pubmedeil2477932; DOI=10.1073/pnas.242603899; RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., RA Altechul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., RA Altechul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E., RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., RA Brownstein M.J., McKernan K.J., Malek J.A., Gunaratne P.H., RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., RA Raha S.S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Willalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A., Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A., Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A., Rahy J., Hulyk S.W., Nadan A., Rodrigues S., Sanchez A., RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., RA Blakesley R.W., Touchman J.W., Green B.D., Dickson M.C., Ra Blakesley R.W., Touchman J.W., Green B.D., Dickson M.C., Ra Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., "Generation and initial analysis of more than 15,000 full-length human "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences.";
                                                                                           Matches
                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Birney E., Hayashizaki Y.; "Analysis of the mouse transcriptome based on functional annotation 60,770 full-length cDMAs."; Nature 420:563-573 (2002).
                                                                                                                                                                                                                                                                              EMBL; AK020266; BAB32049.1; -; mRNA.
EMBL; BC013508; AAH13508.1; -; mRNA.
Ensembl; ENSMUSG00000035852; Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                   This Swiss-Prot entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Extra Entropean Bioinformatics Institute. There are no restructed the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN-FVB/N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUCLEOTIDE
                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                             MGI; MGI:1926156; 9130017N09Rik.
                                                                                                                                                                                                                                                                                                                                                                                                       86
503
                                                                                                                                                                                                                                    COLL
                                                                                                                                                                                                                                                                                                                                                                                                    long as its content is in no
                                                                                                                 Similarity
                        RLQKSQSSDLLERERESVLRREQEVAEERRN
RLOKSOSSDLLEREMESVLRREREVAEERRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE [LARGE SCALE MRNA].
                                                                                                                                                                                        648 AA;
                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE=Colon;
                                                                                                                                                                                      534 I
72281 MW;
                                                                                                            93.2%;
93.5%;
                                                                                      Score 136; Db .,
bred. No. 2.1e-07;
                                                                                                                                                                                                              Potential
                                                                                                                                                                                          1E395B70763B3D1F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                    way
                                                                                                                                                                                                                                                                                                                                                                                                    modified
  533
                                            31
                                                                                                                                                                                                                                                                                                                                                                                                       and
                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                       this
                                                                                                                                                                                                                                                                                                                                                                                                                             he EMBL outstation restrictions on in
                                                                                                                                            648;
                                                                                                                                                                                                                                                                                                                                                                                                       statement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a collaboration
                                                                                           ٥,
                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                         18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ě
                                                                                           0
```

```
EMBL; AJ414146; CAC89950.1; -
EMBL; AZ013908; AAM86623.1; -
EMBL; AE017130; AAS61299.1; -
PIR; AC0136; AC0136.
HSSp; P99372; 1DKG.
HAMAP; MF_0151; -; 1.
InterFro; IPR000740; GrpE.
PANTHER; PTHR11697:SF20; GrpE
                                                                                                                                                                                                                                                                                 DNA Res. 11:179-197(2004).

DNA Res. 11:179-197(2004).

I FUNCTION: Participates actively in the response to hyperosmotic and heat shock by preventing the aggregation of stress-denatured proteins, in association with dnak and grpE. It is the nucleotide exchange factor for dnak and may function as a thermosensor. Unfolded proteins bind initially to dnay, upon interaction with the dnay-bound protein, dnak hydrolyzes its bound ATP, resulting in the formation of a stable complex. GrpE releases ADP from dnak, ATP binding to dnak triggers the release of the substrate protein, thus completing the reaction cycle. Several rounds of ATP-dependent interactions between dnay, dnak and grpE are required for fully efficient folding (By similarity).

1. SUBURIT: Homodimer (By similarity).

1. SUBURIT: SUBURIT: Belongs to the grpE family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDINE-21470413; PubMed-11586360; DOI-10.1038/35097083;
Parkhill J., Wren B.W., Thomson N.R., Titball R.W., Holden M.T.G.,
Prentice M.B., Sebaihia M., James K.D., Churcher C.M., Mungall K.L.,
Baker S., Baeham D., Bentley S.D., Brooks K., Cerdeno-Tarraga A.-M.,
Chillingworth T., Cronin A., Davies R.M., Davis P., Dougan G.,
Chillingworth T., Holroyd S., Jagels K., Karlyshev A.V.,
Leather S., Moule S., Oyston P.C.F., Quail M.A., Rutherford K.M.,
Simmonds M., Skelton J., Stevens K., Whitehead S., Barrell B.G.;
"Genome sequence of Yersinia pestis, the causative agent of plague.";
Nature 413:523-527(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Song Y., Tong Z., Wang J., Wang L., Guo Z., Han Y., Zhang J., Pei Zhou D., Qin H., Pang X., Han Y., Zhai J., Li M., Cui B., Qi Z., Jin L., Dai R., Chen F., Li S., Ye C., Du Z., Lin W., Wang J., Yu Yang H., Wang J., Huang P., Yang R.; "Complete genome sequence of Yersinia pestis strain 91001, an isol evirulent to humans.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN-91001 / B:
PubMed=15368893;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Straley S.C., McDonough
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Deng W., Burland V., Plunkett G. III, Boutin A., May Perna N.T., Rose D.J., Mau B., Zhou S., Schwartz D.C. Fetherseton J.D., Lindler L.E., Brubaker R.R., Plano Straley S.C., McDonough K.A., Nilles M.L., Matson J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC STRAIN=KIM5 / Biovar Mediaevalis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN=CO-92 / Biovar
MEDLINE=21470413; Pub
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Name=grpE; OrderedLocusNames=YPO1107, y3073, YP1049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-OCT-2004 (Rel. 45, Last sequence update)
10-MAY-2005 (Rel. 47, Last annotation updat
GrpE protein (HSP-70 cotactor).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Enterobacteriaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Yersinia pestis
                                                                                                                                                                                                            This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOI=10.1128/JB.184.16.4601-4611.2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-22137863; PubMed-12142430;
                                                                                                                                                                                              use as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Genome sequence of Yersinia pestis
7. Bacteriol. 184:4601-4611(2002).
                                                                                                                                                                                                86
                                                                                                                                                                                                ite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Biovar Mediaevalis;
                                                                                                                                                                                                content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yersinia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           [LARGE SCALE GENOMIC DNA]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Orientalis;
      GrpE; 1.
                                                                                                                                                                                                18
                                                                                                 111
                                                                                                                                                                                                'n
                                                                                                                   Genomic_DNA
                                                                                                 Genomic_DNA
                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KIM.";
                                                                                                                                                                                                way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   update)
                                                                                                                                                                                                rmatics and the EMBL outsta
There are no restrictions or
modified and this statement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R., Plano G.V.,
Matson J.S., Blattner F.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>ه</u>.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mayhew G.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Liss P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                isolate
                                                                                                                                                                                                    is not
```

```
RESULT 5
Q66DA8 YERPS
ID Q66DA8 Y
                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
밁
                              S
                                                                                                                                                                                                                        CC -i-FUNCTION: Participates actively in the response to hyperosmotic CC and heat shock by preventing the aggregation of stress-denatured CC proteins, in association with dnak and grpE. It is the nucleotide CC exchange factor for dnak and may function as a thermosensor. Unfolded proteins bind initially to dnaJ; upon interaction with CC the dnaJ-bound protein, dnak hydrolyzes its bound ATP, resulting CC in the formation of a stable complex. GrpE releases ADP from dnak; CC ATP binding to dnak triggers the release of the substrate protein, CC thus completing the reaction cycle. Several rounds of ATP-CC dependent interactions between dnaJ, dnak and grpE are required CC for fully efficient folding (By similarity).

CC EMBL; BX936398; CAH20381.1; -; Genomic DNA. DR GO; GO:0001087; F:chaperone binding; IEA. GO; GO:0051087; F:chaperone binding; IEA. GO; GO:0051087; F:protein homodimerization activity; IEA. GO; GO:00542803; F:protein folding; IEA. GO; GO:006457; F:protein folding; IEA. GO; GO:006457; F:protein folding; IEA. GO; GO:0066457; F:protein folding; IEA.
                                                                 Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chaperone;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chain P.S.G., Carniel E., Larimer F.W., Lamerdin J., Regala W.M., Georgescu A.M., Vergez L.M., Land M.L., Brubaker R.R., Fowler J., Hinnebusch J., Marceau M., Simonet M., Chenal-Francisque V., Souza B., Dacheux E Derbise A., Hauser L.J., Garcia E., "Insights into the evolution of Yersinia pestis throu comparison with Yersinia pseudotuberculosis."; proc. Natl. Acad. Sci. U.S.A. 101:13826-13831(2004)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25-OCT-2004 (TrEMBLrel. 28, Created)
25-OCT-2004 (TrEMBLrel. 28, Last sequence up
25-OCT-2004 (TrEMBLrel. 28, Last annotation
G7PE protein (HSP-70 cofactor).
Name=G7PB; OrderedLocusNames=YPTB1141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF01025; GrpB; 1.
PRINTS; PR00773; GRPEPROTEIN.
PROSITE; PS01071; GRPE; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA]
STRAIN=1932953 / Serotype I;
PubMed=15358858; DOI=10.1073/pnas.0404012101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriaceae; Yersinia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q66DA8 YERPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=633;
                                                                                                                                              PROSITE; PS01071; GRPE; 1. Chaperone; Complete proteo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Yersinia pseudotuberculosis.
                                                                                                                                                                               PRINTS; PR00773; GRPEPROTEIN.
                                                                                                                                                                                             InterPro; IPR000740; GrpE. Pfam; PF01025; GrpE; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       45
 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6 OSSDILERERESVIRREQEVAEERR
                                σ
                                                                 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QLSDALQRERESLLRAKABVENIRR
                                  QSSDLLERERESVLRREQEVAEERR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Complete proteome; Heat shock.
192 AA; 21557 MW; BAIA165F68AD1062 CRC64;
                                                                                                                                Complete 192 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                  proteome;
21545 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     45.2%;
                                                                                45.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 66; DB Pred. No. 8; 3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       u
•
                                                                                  Score
Pred.
                                                                                                                                                   Heat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                    AFD5FC7AA7472062 CRC64;
                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENOMIC DNA].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Souza B., Dacheux D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30
                                                                                  No .
                                  30
                                                                                                                                                     shock.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        192
                                                                                                 BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         :
                                                                                                   2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Enterobacteriales;
                                                                                                 Length 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     through whole-genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Medigue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stoutland P
Motin V.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P.O.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                      0,
```

```
RESULT QUESTION OF THE STATE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dujon B., Sherman D., Fischer G., Durrens P., Casaregola S.,
Lafontaine I., de Montigny J., Marck C., Neuveglise C., Talla E.,
Goffard N., Frangeul L., Algle M., Anthouard V., Babour A., Barbe V.,
Barnay S., Blanchin S., Beckerich J.-M., Beyne E., Bleykasten C.,
Boisrame A., Boyer J., Cattolico L., Confanioleri F., de Daruvar A.,
Boisrame A., Boyer J., Cattolico L., Confanioleri F., de Daruvar A.,
A Despons L., Fabre E., Fairhead C., Ferry-Dumazet H., Groppi A.,
A Despons L., Fabre E., Fairhead C., Ferry-Dumazet H., Groppi A.,
A Mantraye F., Hennequin C., Jauniaux N., Joyet P., Kachouri R.,
A Kerrest A., Koszul R., Lemaire M., Lesur I., Ma L., Muller H.,
A Kerrest A., Koszul R., Lemaire M., Lesur I., Ma L., Muller H.,
A Nicaud J.-M., Nikolski M., Oztas S., Ozier-Kalogeropoulos O.,
A Nicaud J.-M., Nikolski M., Oztas S., Uzier-Kalogeropoulos E., Witth B.,
A Swennen D., Tekaia F., Wesolowski-Louvel M., Westhof E., Witth B.,
A Zeniou-Meyer M., Zivanovic Y., Bolotin-Fukuhara M., Thierry A.,
Buchier C., Caudron B., Scarpelli C., Gaillardin C., Weissenbach J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 15
                                                                                                                                                                                                                                                                                                                                                                                                                  Q7NL34_GLOVI
Q7NL34;
01-MAR-2004 (
01-MAR-2004 (
                                                                                                                                                                                                                                                                                                                                                  U1-MAR-2004 (TrEMBLrel. 26,
01-MAR-2004 (TrEMBLrel. 26,
01-MAR-2004 (TrEMBLrel. 26,
Glr129 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro;
PROSITE; F
PROSITE; F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Complete
SEQUENCE
                                                Nakamura Y., Kaneko T., Sato S., Mimuro M., Miyashita H., Tsuchiya Sasamoto S., Watanabe A., Kawashima K., Kishida Y., Kiyokawa C., Kohara M., Matsuno A., Nakazaki N., Shimpo S., Takeuchi C., Yamada M., Tabata S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OrderedLocusNames=YALIOF12837g;
Yarrowia lipolytica (Candida lipolytica).
Eukaryota; Fungi; Ascomycota; Saccharomycotina;
Saccharomycetales; Dipodascaceae; Yarrowia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q6C1W6 YARLI
                                                                                                                                                        MEDLINE=22977040; PubMed=14621292;
                                                                                                                                                                                 NUCLEOTIDE SEQUENCE
STRAIN=PCC 7421;
                                                                                                                                                                                                                                                    Bacteria; Cyanobacteria; Gloeobacteria;
NCBI_TaxID=33072;
                                                                                                                                                                                                                                                                                                                                       OrderedLocusNames=glr1292;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR001670; Fe-ADH.
InterPro; IPR006162; Ppantne_S.
PROSITE; PS00060; ADH IRON_2; UNKNOWN_1.
PROSITE; PS00012; PHOSPHOPANTETHEINE; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bouchier C., Caudron B., S
Wincker P., Souciet J.-L.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC PubMed=15229592; DOI=10.1038/nature02579;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-OCT-2004
  "Complete genome structure of Gloeobacter violaceus cyanobacterium that lacks thylakoids.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YARLI
                                                                                                                                                                                                                                                                                                               loeobacter violaceus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GLOVI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CR382132; CAG78153.1; -; Genomic_DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              e evolution in yeasts.";
430:35-44(2004).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 l Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QXQEEAERLEREEEERLREEEERQAKMEEERQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       proteome.
1229 AJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QKSQSSDLLERERESVLRREQE----VAEERR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               43.5%;
llarity 45.5%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AA,
                                                                                                                                                                                                         [LARGE SCALE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       132821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28,
                                                                                                                                                                                                                                                                                                                                                                                          Last
Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₩;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last
Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 63.5; DB 2;
Pred. No. 1.1e+02;
6; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence update)
annotation update)
                                                                                                                                                                                                           GENOMIC
                                                                                                                                                                                                                                                                                                                                                                                          annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                     sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63DB6815F938F9A9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                266
                                                                                                                                                                                                                                                                                       Gloeobacterales;
                                                                                                                                                                                                           DNA]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ጅ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Saccharomycetes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 1229;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                          PCC 7421,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       de Daruvar A.,
                                                                                                                                                                                                                                                                                         Gloeobacter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Barbe V.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1:
```

```
RESULT
OF MYY9
ID
OF M
                 RESULT QAWSW1 ID WGM QA AC QA AC QA DT 13 DT 13 DT 13 DT 13 DF RN GN OS AS COC EU COC 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      W ULL

N ULL

N ULLEOTIDE SEQUENCE.

R PUDMed=14998527; DOI=10.1016/j.fgb.2003.12.003;

A Pain A., Woodward J., Quail M.A., Anderson M.J., Clark R., Collins A., Fraser A., Harris D., Larke N., Murphy L., Humphray S., RA Fosker N., Fraser A., Price C., Rabbinowitsch E., Rajandream M-A., RA Collis, Pertea M., Price C., Rabbinowitsch E., Rajandream M-A., RA Denning D.W., Barrell B., Hall N.;

RA Denning D.W., Barrell B., Hall N.;

RI "Insight into the genome of Aspergillus fumigatus: analysis of a 9: kb region encompassing the nitrate assimilation gene cluster.";

RI Fungal Genet. Biol. 41:443-453 (2004).

DR EMBL; BK649605; CAE47870.1; -; Genomic DNA.

CEONTENCE 524 AA; 60627 MW; DF91083335A8BDD3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SARARE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LT 9
W1_ASPFU
Q4WSW1_ASPFU I
                 Arroya J., 1
Bowyer P., (
Farman M., 1
Fosker N., 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-JUL-2004 (TrEMBLrel. 27, Created)
05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation updat
RNA export mediator glel homologue, putative.
ORFNames=AfA24A6.110;
                                                                                                                                                                                                                                                                                                                       ORFNames=Afulg11440;
Aspergillus fumigatus Af293.
Eukaryota; Fungi; Ascomycota
Eurotiales; Trichocomaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  13-SEP-2005 (TrEMBLrel. 31, 13-SEP-2005 (TrEMBLrel. 31, 13-SEP-2005 (TrEMBLrel. 31, RNA export mediator (Gle1),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Aspergillus fumigatus (Sartorya fumigata).
Eukaryota; Fungi; Ascomycota; Pezizomycotina; Eurotiom
Eurotiales; Trichocomaceae; mitosporic Trichocomaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q6MYY9 ASPFU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA Res. 10:137-145(2003).
EMBL; BA000045; BAC89233.1;
InterPro; IPR008538; DUF820,
Pfam; PF05685; DUF820; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q4WSW1;
                                                                                                                                                                                      STRAIN=Af293;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=5085;
                                                                                                                                                   Nierman W.,
                                                                                                                                                                                                                            NUCLEOTIDE
                                                                                                                                                                                                                                                                                        NCBI_TaxID=330879;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ASPFU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              l Similarity
14; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RLQKSQSSDLLERERESVLRREQEVAEERR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QEAERLERERAEKLRREQEEAARR 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RORAEGERORAEGERORAERAEGEVAGERR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               proteome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OSSDLLERERESVLRREQEVAEER
A);
Pain A., Anderson M.J., Wortman U., ....
Berriman M., Abe K., Archer D.B., Bermejo C., Benne
Chen D., Collins M., Coulsen R., Davies R., Dyer P
Chen D., Collins M., Feldblyum T.V., Fischer
Carria M.J., Goble A.,
                                                                                                                                                                                                                         SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   266 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                              Ascomycota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    42.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 42.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       X.
                                                                                                                                                                                                                                                                                                                           mitosporic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 62; DB Pred. No. 33; 4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                             putative.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 67;
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 62;
Pred. No.
                                                                                                                                                                                                                                                                                                                           Pezizomycotina; Eurotiomycetes;
itosporic Trichocomaceae; Aspergillus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6BE848A5426F5C65 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB
67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eurotiomycetes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 524;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 266;
                                                                                                                                                      Kim H.Stanley.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                    Dyer P.S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Aspergillus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Collins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ау S.,
м-А.,
                                                                                .
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a 922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
```

```
RESULT 10
Q18137_CABEL PRELIMINARY;
AC Q18137;
DT 01-NOV-1996 (TYEMBLrel. 01,
DT 01-OCT-2003 (TYEMBLrel. 25,
DE Aplcal junction molecule px
QN Amme-ajm-1, OFNNammes-C25A11.
OS Cenorhabditis elegans
OC Rhabditidae; Peloderinae; C3
CX NCBI_TAXID=6239;
RN [1]
RP NUCLEOTIDE SEQUENCE [LARGE :
RC STRAIN=Bristol N2;
RN MUCLEOTIDE SEQUENCE [LARGE :
RC STRAIN=Bristol N2;
RN [1]
RP NUCLEOTIDE SEQUENCE [LARGE :
RC STRAIN=Bristol N2;
RN [1]
RP NUCLEOTIDE SEQUENCE [LARGE :
RC STRAIN=Bristol N2;
RN [1]
RP NUCLEOTIDE SEQUENCE [LARGE :
RC STRAIN=Bristol N2;
RN [1]
RN NUCLEOTIDE SEQUENCE [LARGE :
RC STRAIN=Bristol N2;
RN [1]
RN NUCLEOTIDE SEQUENCE [LARGE :
RC STRAIN=Bristol N2;
RN STRAIN=Bristol N2;
RN STRAIN=Bristol N2;
RN HUCLEOTIDE SEQUENCE [LARGE :
RC STRAIN=Bristol N2;
RN HUCLEOTIDE SEQUENCE |
RC STRAIN=Bristol N2;
RN HUCLEOTIDE SEQUENCE |
RC STRAIN=Bristol N2;
RN HULLEOTIDE SEQUENCE |
RC STRAIN=Bristol N2;
RN HULLEOTIDE SEQUENCE |
RN HUCLEOTIDE SEQUENCE |
RC STRAIN=Bristol N2;
RN HULLEOTIDE SEQUENCE |
RC STRAIN=Bristol N2;
RN HULLEOTIDE SEQUENCE |
RC STRAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
      밁
                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RA Haas H., Harris D., Horiuchi H., Huang J., Humphrey S., Jimenez J.,
RA Keller N., Khouri H., Kitemoto K., Kobayashi T., Kulkarni R.,
RA Kumagai T., Lafton A., Latge J.-P., Li W., Lord A., Lu C.,
RA Kumagai T., May G.S., Miller B.L., Mohamoud Y., Molina M., Monod M.,
RA Mouyna I., Mulligan S., Murphy L., O'Neil S., Paulsen I.,
RA Mouyna I., Mulligan S., Murphy L., O'Neil S., Paulsen I.,
RA Mouyna I., Mulligan S., Murphy L., O'Neil S., Paulsen I.,
RA Renauld H., Robson G.D., Rodriguez de Cordoba S., Rodriguez-Pena J.M.,
RA Renauld H., Robson G.D., Rodriguez de Cordoba S., Rodriguez-Pena J.M.,
RA Renauld H., Robson G.D., Rodriguez de Cordoba S., Rodriguez-Pena J.M.,
RA Renauld H., Robson G.D., Rodriguez de Cordoba S., Rodriguez-Pena J.M.,
RA Renauld H., Robson G.D., Rodriguez de Aldana C.R., Weidman J.,
RA Renauld H., Robson G.D., Rodriguez de Aldana C.R., Weidman J.,
RA Renauld H., Robson G.D., Saunders D., Seeger K., Squares R., Squares S.,
RA Renauld H., Robson G.D., Rodriguez de Aldana C.R., Weidman J.,
RA Ronning C.M., Tekaia F., Turner G., Vazquez de Aldana C.R., Weidman J.,
RA White O., Woodward J., Yu J.-H., Fraser C., Galagan J.E., Asai K.,
RA White O., Woodward J., Yu J.-H., Fraser C., Galagan J.E., Asai K.,
RA Wachida M., Hall N., Barrell B., Denning D.W.;
REGenomic sequence of the pathogenic and allergenic filamentous fungus
RA Rapergillus fumigatus.";
Submitted (MAY-2005) to the EMBL/GenBank/DDBJ databases.

C. EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 14
                                                                                                                       Query Match
Best Local S
Matches 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JUN-2001 (TrEMBLrel. 01, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence up
01-OCT-2003 (TrEMBLrel. 25, Last annotation
Apical junction molecule protein 1, isoform
Name-ajm-1; ORFNames-C25A11.4;
Caenorhabditis elegans.
Eukaryota: Metarro.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Goldman G.H.,
                                                                                                                                                                                                                                                                                                   Ensembl; C25A11.4; Caenorhabditis elegans WormBase; WBGene00000100; ajm-1. WormPep; C25A11.4b; CE27084.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         The C. elegans sequencing consortium; "Genome sequence of the nematode C. e investigating biology."; science 282:2012-2018(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=Bristol N2;
MEDLINE=99069613; PubMed=9851916;
                                                                                                                                                                                                                                                                                                                                                                                        EMBL; U39650; AAK39186.1; -; Genomic_DNA.
HSSP; P05412; 1FOS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   preliminary data.
, AAHF01000004; F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  103
      687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          σ
                                                              w
                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QEAERLERERAEKLRREQEEAARR 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QSSDLLERERESVLRREQEVALER 29
EEAQLADLLERERHNQLIRENERREAVERAN
                                                              QKSQSSDLLERERESVLRREQEVAE--ERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             524 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gomi K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EAL90471.1; -; 60627 MW; DF9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       K., Griffith-Jones S., Gwilliam R., Haas B.,
Horiuchi H., Huang J., Humphrey S., Jimenez
                                                                                                                                                                                                                                              113558 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               [LARGE SCALE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               42.5%;
58.3%;
                                                                                                                                                      42.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    oda; Chromadorea; Rhabditida; Rhabditoidea; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 62;
Pred. No.
                                                                                                                          5
                                                                                                                          Pred. No. 1.30
5; Mismatches
                                                                                                                                                      Score 62; DB 2;
Pred. No. 1.3e+0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; -; Genomic_DNA.
DF91083335A8BDD3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                 6C4FBC0CFAD3BB03 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENOMIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        elegans:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2;
                                                                                                                                                      .3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           n update)
n b.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ø
                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 524;
                                                                                                                                                                                     Length 944;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        platform
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                             2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                             1;
```

RESULT 11
Q582W2\_9TRYP
ID Q582W2\_9TRYP PRELIMINARY;

PRT;

963

₹

5

```
RESULT 12
Q95ZY7_CAEEL
ID Q95ZY7_CAEEL
AC Q95ZY7;
DT 01-DEC-2001
                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOUTH REAL PROPERTY OF THE PRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 13
Query Match
Best Local Similarity
Matches 16; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q582W2;
10-MAY-2005
10-MAY-2005
10-MAY-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ghedin E., Blandin G., Bartholomeu D., Caler E., Haas B., Hanninghelin J., Hou L., Djikeng A., Feldblyum T., Hostetler J., Johnson J., Jones K., Koo H.L., Larkin C., Pai G., Peterson J., Khalak H.G., Salzberg S., Simpson A.J., Tallon L., Van Aken S., Wanless D., White O., Wortman J., Fraser C.M., Bl-Sayed N.M.A.; Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hypothetical protein. SEQUENCE 963 AA; 1
                                                                                             Complete
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=GUTatl0.1,
Haas B., Blandin G., El-Sayed N.;
Submitted (APR-2005) to the EMBL/GenBank/DD
EMBL; AC091330; AAX80727.1; -; Genomic_DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUCLEOTIDE SEQUENCE.
STRAIN=GUTat10.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Trypanosoma brucei.
Eukaryota; Euglenozoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hypothetical protein. ORFNames=Tb927.3.2490;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bukaryota; Metazoa; Nematoda; Chromadorea;
Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-DEC-2001 (TrEMBLrel. 19, Last sequence up
01-MAR-2003 (TrEMBLrel. 23, Last annotation
Apical junction molecule protein 1, 1soform
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (APR-2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       El-Sayed N.M., Khalak H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN=GUTat10.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=5691;
                                                                                                                                        WormBase; WBGene00000100; ajm-1.
WormPep; C25A11.4c; CE27085.
                                                                                                                                                                                                        EMBL; U39650; AAK39188.1; -;
HSSP; P05412; 1FOS.
                                                                                                                                                                                                                                                     investigating biology.";
Science 282:2012-2018(1998).
                                                                                                                                                                                                                                                                                                   The C. elegans sequencing consortium Genome sequence of the nematode C.
                                                                                                                                     WormPep;
                                                                                                                                                                                Ensembl; C25All.4; Caenorhabditis
                                                                                                                                                                                                                                                                                                                                                  MEDLINE=99069613; PubMed=9851916;
                                                                                                                                                                                                                                                                                                                                                                        STRAIN=Bristol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Name=ajm-1; ORFNames=C25A11.4;
                                                                                                                                                                                                                                                                                                                                                                                             NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                        CBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      _CABEL PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                proteome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KLDKSKGRDAVMRERQSIQAMRKTVLEERR 555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RLOKSOSSDLLERERESVLRREQEVALERR 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        G (TrEMBLrel.
G (TrEMBLrel.
G (TrEMBLrel.
                                                                                             1148 AA;
    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                        N2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              110072 MW;
                                                                                                                                                                                                                                                                                                                                                                                                [LARGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    42.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               El-Sayed N.;
to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                       42.5%;
51.6%;
                                                                                             137473 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kinetoplastida; Trypanosomatidae; Trypanosoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Adams M.D.;
                                                                                                                                                                                                                                                                                                                        consortium;
                                                                                                                                                                                                                                                                                                                                                                                                SCALE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Last sequence update
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
                          Score 62;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 62; DB 2;
Pred. No. 1.3e+02;
6; Mismatches 11
                                                                                                                                                                                                                              Genomic_DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              341C60AD1FFFFF28 CRC64;
                                                                                             432F662CC8E20729 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                GENOMIC
                                                                                                                                                                                   elegans
                                                                                                                                                                                                                                                                                                     elegans: a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1148
                          DB 2; 1
1.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                DNA]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rhabditida; Rhabditoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    databases
                                               Length 1148;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 963;
                                                                                                                                                                                                                                                                                                        platform
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hannick L.,
       ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
         ۲.
```

w

```
RESULT 14
Q18138 CAE
ID Q1813
AC Q1813
DT Q1-W
DT Q1-W
DT Q1-W
DT AD1-G
GN Name=
GN NAME
OC Rhab
OC RTA
RC ITA
RC STRA
RC STRA
RC STRA
RC MEDI
RC SCIE
RH HSGE
DR ENSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OR RESULT OR RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The C. elegans sequencing consortium;
"Genome sequence of the nematode C. elegans:
investigating biology.";
Science 282:2012-2018(1998).
EMBL; U39650; AAM51517.1; -; Genomic_DNA.
HSSP; P05412; IFOS.
Ensembl; C25A11.4; Caenorhabditis elegans.
WormBase; WBGene00001100; ajm-1.
WormBase; WBGene00001100; ajm-1.
WormPap; C25A11.4d; CE30874.
InterPro; IPR002893; Znf_MYND.
PROSITE; PS50865; ZF_MYND_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ILT 13
C7 CAEEL
Q8MQC7 CAEEL 1
Q8MQC7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 38_CAEEL
Q18138_C
Q18138;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-NOV-1996 (TrEMBLrel. 01, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence up
01-MAR-2004 (TrEMBLrel. 26, Last annotation
Apical junction molecule protein 1, isoform
Name=ajm-1; ORFNames=C25All.4;
                                                                                                         investigating biology,";
Science 282:2012-2018(1998).
EMBL; U39650; AAK39187.1; -; Genomic_DNA.
HSSP; P05412; 1FOS.
Ensembl; C25A11.4; Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE; PS50865;
Complete proteome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Apical junction molecule protein 1, Name=ajm-1; ORFNames=C25All.4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-OCT-2002 (TrEMBLrel. 22, Creat
01-OCT-2002 (TrEMBLrel. 22, Last
01-MAR-2004 (TrEMBLrel. 26, Last
                           WormBase; WBGene00000100; ajm-1.
WormPep; C25All.4a; CE27083.
InterPro; IPR002893; Znf_MYND.
                                                                                                                                                                                                                                                                        The C. elegans sequencing
                                                                                                                                                                                                                                                                                                 STRAIN=Bristol N2;
MEDLINE=99069613; PubMed=9851916;
                                                                                                                                                                                                                                                                                                                                                        NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                         Rhabditidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=99069613; PubMed=9851916;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rhabditidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Caenorhabditis elegans.
Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea;
                                                                                                                                                                                                                                            "Genome sequence of the nematode
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAEEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 QKSQSSDLLERERESVLRREQEVAE--ERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EEAQLADLLERERHNQLIRENERREAVERAN 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QKSQSSDLLERERESVLRREQEVAE--ERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EEAQLADLLERERHNQLIRENERREAVERAN 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1439 AA; 170263 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                      etazoa, Nematoda, Chromadorea, Rhabditida, Rhabditoidea, Peloderinae, Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N2;
                                                                                                                                                                                                                                                                                                                                                        [LARGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               42.5%; Score 62;
51.6%; Pred. No.
                                                                                                                                                                                                                                                                             consort 1um;
                                                                                                                                                                                                                                                                                                                                                           SCALE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. 2e+
; Mismatches
                                                                                                                                                                                                                                                 :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30753B0B68FB749F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C. elegans: a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          annotation update)
1, isoform d.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence update)
                                                                                                                                                                                                                                                                                                                                                           GENOMIC
                                                                                                                                                                                                                                            elegans:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 2;
                                                                                                                                                                                                                                                                                                                                                           DNA]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             n update)
n a.
                                                                                                                                                                                                                                                 a platform
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1439;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              platform
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         μ
```

S

N

LQKSQSSDLLERBRESVLRREQEVAEERR 30

```
RESULT 15
Q4S6V2_TETNG
                                                                                                              SOTTED DRAFF TO DRAFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
     Matches
                               Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Jailion C., Aury J.M., Brunet F., Petit J.L., Stange-Thomann N.,
Mauceli E., Bouneau L., Fischer C., Ozouf-Costaz C., Bernot A.,
Nicaud S., Jaffe D., Fisher S., Lutfalla G., Dossat C., Segurens B.,
Dasilva C., Salanoubat M., Levy M., Boudet N., Castellano S.,
Dasilva C., Salanoubat M., Levy M., Boudet N., Castellano S.,
Anthouard V., Jubin C., Castelli V., Katinka M., Vacherie B.,
Blemont C., Skalli Z., Cattolico L., Poulain J., De Berardinis V.,
Cruaud C., Duprat S., Brottier P., Coutanceau J.P., Gouzy J.,
Parra G., Lardier G., Chapple C., McKernan K.J., McEwan P., Bosak S.,
Parra G., Lardier G., Chapple C., McKernan K.J., McEwan P., Bosak S.,
Kellis M., Volff JN., Guigo R., Zody M.C., Mesirov J.,
Lindblad-Toh K., Birren B., Nusbaum C., Kahn D., Robinson-Rechavi M.,
Laudet V., Schachter V., Quetier F., Saurin W., Scarpelli C.,
Wincker P., Lander E.S., Weissenbach J., Roest Crollius H.;
"Genome duplication in the teleost fish Tetraodon nigroviridis reveals"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Complete SEQUENCE
                                                                                                                                                                              SMART; SM00233; PH; 1.
SMART; SM00325; RhoGEF; 1.
PROSITE; PSS0010; DH 2; 1.
PROSITE; PSS0003; PH_DOMAIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q4S6V2;
13-SEP-2005 (TrEMBLrel. 31, Created)
13-SEP-2005 (TrEMBLrel. 31, Last sequence update)
13-SEP-2005 (TrEMBLrel. 31, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genoscope, Whitehead Institute Centre for Genome Researc.
Submitted (FEB-2004) to the EMBL/GenBank/DDBJ databases.
-I- CAUTION: The sequence shown here is derived from an
EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tetraodon nigroviridis (Green puffer).
Eukaryota, Metazoa, Chordata, Craniata; Vertebrata, Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Tetraodontiformes;
Tetradontoidea; Tetraodontidae; Tetraodon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS50865; ZF_MYND_2; 1.
                                                                                                                                       NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                             preliminary data.
-i- SIMILARITY: Contains 1 PH domain
EMBL; CAAE01014723; CAG03630.1; -; Ge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the early vertebrate proto-karyotype.";
Nature 431:946-957(2004).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=99883;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORFNames=GSTENG00023112001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q4S6V2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q4S6V2
                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                        Pfam; PF00621
                                                                                                                                                                                                                                                                                                                                    Ptam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR001849;
InterPro; IPR000219;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _TETNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16;
  Similarity
12; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     proteome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QKSQSSDLLERERESVLRREQEVAE--ERRN
:::| :||||||| : | || | | | | || |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EEAQLADLLERERHNQLIRENERREAVERAN
                                                                                                              1484
1484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Whitehead Institute Centre for Genome Research;
  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                     .; RhoGEF; 1.
                                                                                                                                                                                                                                                                                                                                    PH; 1.
                                                                                                              AΑ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA;
                                                                                                                                          1484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        175237 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      42.5%;
                            41.8%;
                                                                                                                                                                                                                                                                                                                                                             RhoGEF.
                                                                                                              165189 MW;
; Score 61; DB
; Pred. No. 2.6e
8; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 62;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                              4BD39AFAD2C48FAF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EC9FAA97040EC7BA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                Genomic_DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31
                                 .6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₽
                                                              2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8;
                                                        Length 1484;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 1480;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entry which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2
        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ۲
        0
```

ğ

838 LKKTTEDDKLKKERDSLLASEQDLTESLR 866

Search completed: March 3, 2006, 13:26:09 Job time : 14.8397 secs

(Orden) Mujorg Spod sign

```
Regult
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
                                                                                                                                                                                                         55.5
                                                                                                                                             seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein search, using sw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  March 3, 2006, 13:35:46; Search time 4.15743 Seconds (without alignments)
                                                                                                                                                                                                                                                                                                                                              Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        572060 seqs, 82675679 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-646-873-44
146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                         100
                                                                                                                                                                                                                                                                                 100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                          RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd
1898
1898
1666
167
320
321
205
205
205
321
734
811
                                                                                                                                                                                                                                                                                                                                                DB
                                US-09-538-092-1280

US-08-365-103B-14

US-08-365-103B-12

US-08-365-103B-8

US-09-365-103B-8

US-09-270-767-35272

US-09-270-767-51489

US-09-949-016-9884

US-09-134-000C-5602

US-09-046-8994-35

US-09-046-8994-35
                                                                                                                                                                    US-09-248-796A-18714
US-09-949-016-8508
US-09-543-681A-6489
US-08-056-200-94
                                                                                                                                                                                                                                                                                US-09-050-516-44
US-10-278-547-44
US-09-050-516-47
US-10-278-547-47
                                                                                                                                                                                                                      US-10-092-138A-26
US-08-681-219A-26
                                                                                                                                                           US-08-800-644-94
                                                                                                                                                                                                                                                                                                                                                                                      SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mode1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      616.473 Million cell updates/sec
                                                                                                                                                                                                                     Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                 Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                Description
                                                                                                                                                           Sequence
Sequence
                                                                                    Sequence
Sequence
                                                                                                                                   Sequence
Sequence
                                              Sequence
Sequence
                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                   Sequence
                                                                                                          Sequence
                                                                                                                        Sequence
                                                                        Sequence
                        Sequence
                                     Sequence
 94, Appl
1280, Appl
12, Appl
12, Appl
10, Appl
11, Appl
11, Appl
11, Appl
                                                                                                                                                                                  26, Appl
26, Appl
18714, A
8508, Ap
                                                                                                                                                                                                                                             42, Appl
42, Appl
3120, Ap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent No.
                                      ATTORNEY AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
  INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                    ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: Fast-SEQ for Windows Version
CURRENT APPLICATION DATA:
                                                                                                               CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/8
FILING DATE: 31-MAR-1997
                                                                                                                                                              APPLICATION NUMBER: US/09/050,516 FILING DATE:
                           TELEFAX: 847/938-2623
```

5	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28
50	50	50	50	50	50	50.5	51	51	51	51	52	52	52	52	52	52	52
34.2	34.2	34.2	34.2	34.2	34.2	34.6	34.9	34.9	34.9	34.9	35.6	35.6	35.6	35.6	35.6	35.6	35.6
538	538	495	255	255	149	550	1003	1003	868	373	1487	919	859	859	712	538	482
N	N	N	ผ	N	N	N	N	N	N	N	N	N	N	N	N	N	N
US-09-718-096-12	US-09-309-572-12	US-09-538-092-224	US-09-973-278-386	US-09-227-357-488	US-09-270-767-42544	US-09-538-092-1259	US-09-438-185A-8	US-09-198-452A-17	US-09-543-681A-5357	US-09-270-767-42838	US-09-489-039A-12113	US-09-949-016-6954	US-09-252-991A-21413	-09	US-09-949-016-10600	US-09-370-368-9	-09
Sequence 12, App	Sequence 12, App	Sequence 224, App	-	488,	4	Sequence 1259, Ap	×	Sequence 17, Appr	Sequence 535/, Ap	42838		Sequence 6954, Ap					

ALIGNMENTS

#### US-09-050-516-44 APPLICANT: KLASS, MI APPLICANT: KCATOCHVI APPLICANT: ROBERTS-R APPLICANT: RUSSELL, APPLICANT: STROUPE, TITLE OF INVENTION: TITLE OF INVENTION: APPLICANT: APPLICANT: NUMBER OF SEQUENCES: 4 CORRESPONDENCE ADDRESS: APPLICANT: APPLICANT: APPLICANT: COUNTRY: CITY: Abbott Park STREET: ADDRESSEE: Abbott Laboratories STREET: 100 Abbott Park Road No. 6627414 INFORMATION: Ħ Application US/09050516 USA HODGES, STEVEN C. KLASS, MICHAEL R. KRATOCHVIL, JON D. ROBERTS-RAPP, LISA RUSSELL, JOHN C. STROUPE, STEPHEN D. VENTION: REAGENTS AND METHODS USEFUL VENTION: FOR DETECTING DISEASES OF THE GASTROINTESTINAL VENTION: TRACT VENTION: TRACT COHEN, MAURICE COLPITTS, TRACEY L. FRIEDMAN, PAULA N. HAYDEN, MARK GORDON, JULIAN GRANADOS, EDWA BILLING-MEDEL, EDWARD N. PATRICIA

08/828,855

6065.US.P1

44:

SEQUENCE CHARACTERISTICS:

```
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 2
US-10-278-547-44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-050-516-44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Patent No. 6660834
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 44,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 100.0%;
Best Local Similarity 100.0%;
                                                                                                                TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 44:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/09/050,516

FILING DATE: «Unknown»

APPLICATION NUMBER: 08/828,855

FILING DATE: 31-MAR-1997

ATTORNEY/AGENT INFORMATION:

NAME: Becker, Cheryl L.

REGISTRATION NUMBER: 35,441

REGISTRATION NUMBER: 35,441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 31 amino
TYPE: amino acid
STRANDEDNESS: sir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
TOPOLOGY: linear
MOLECULE TYPE: No. 6660834e
SEQUENCE DESCRIPTION: SEQ ID NO: 44:
                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: TELECOMMUNICATION INFORMATION: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: BILLING-MEDEL, PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 RLOKSOSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/10/278,547 FILING DATE: 23-Oct-2002 CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Abbott Park
STATE: IL
                                                       STRANDEDNESS: single
                                                                             TYPE: amino acid
                                                                                                                                                                          TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: USA
                                                                                            LENGTH: 31 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/10278547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No. 6627414e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GRANADOS, EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COHEN, MAURICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 146; DB 2
Pred. No. 9e-13;
                                                                                                                                                                                                                                     6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                               MOLECULE TYPE: No. 6627414e
US-09-050-516-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-050-516-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-278-547-44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 47,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patent No.
                                                                                                                                              INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 215 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION UNMBER: 08/828
APPLING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: STROUPE, TITLE OF INVENTION: TITLE OF INVENTION: TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 60064-3500
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                           REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60,0
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: PastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
Y MACCE 100.0%; Score 146; DB 2; Local Similarity 100.0%; Pred. No. 7.6e-12; Pes 31; Conservative 0; Mismarchac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                STRANDEDNESS:
                                                                                                                                 TYPE: amino acid
                                                                                                                                                                                                                                                                                NAME: Becker, Cheryl REGISTRATION NUMBER:
                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                 TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7, Application US/09050516 6627414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RLOKSOSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RUSSELL, JOHN C.
STROUPE, STEPHEN TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BILLING-MEDEL, PATRICIA
                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HAYDEN,
                                                                                                             single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STEPHEN D.
REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 146; DB 2
100.0%; Pred. No. 9e-13;
tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EDWARD N.
                                                                                                                                                                                                                                                                                                                                             08/828,855
                                                                                                                                                                                   47:
                                                                                                                                                                                                                                                                 6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 2; Length 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                    Length 215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
        Indels
        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

S

RLQKSQSSDLLERERESVLRREQEVAEERRN 31

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-278-547-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 4
밁
                            5
                                                                                                                                             US-10-278-547-47
                                                                    Query Match
Best Local S
Matches 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                       TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: <Unknown>
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                              NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM: DOS
SOPTWARE: PastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: ADDOLT Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                          TOPOLOGY: linear MOLECULE TYPE: No. 6660834e SEQUENCE DESCRIPTION: SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    47,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              73
                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RLQKSQSSDLLERERESVLRREQEVAEERRN 103
                     RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                     TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM Compatible
 RLOKSOSSDLLERERESVLRREQEVABERRN 103
                                                                                                                                                                                                                  STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY: USA
                                                                                                                                                                                                                                                                                                                             TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/10278547
                                                                 100.0%; Score 146; DB 2; ilarity 100.0%; Pred. No. 7.6e-12; Conservative 0; Mismatches 0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GRANADOS, EDWY HAYDEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BILLING-MEDEL, PATRICIA
COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HODGES, STEVEN C.
KLASS, MICHAEL R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HAYDEN, MARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CRATOCHVIL, JON D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                        6065.US.P1
                                                                                                                                                                47:
                                                                                                           Length 215;
                                                                        0
                                                                        Gaps
                                                                        0
```

RESULT 5

RESULT 6 US-10-278-547-42

Sequence 42, Application Patent No. 6660834
GENERAL INFORMATION:

Application US/10278547

BILLING-MEDEL, PATRICIA COHEN, MAURICE

```
US-09-050-516-42
밁
                           ঠ
                                                                                                                            ; TOPOLOGY: linear
; MOLECULE TYPE: No. 6627414e
US-09-050-516-42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Patent No.
                                                                                             Query Match
                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/828
APPLICATION NUMBER: 31-MAR-1997
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L
REGISTRATION NUMBER: 35,44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: RUSSELL,
APPLICANT: STROUPE,
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                               NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTESQ for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: USA
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: Abbott Laboratories
                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: . 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PPLICANT
                                                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STREET:
                                                                                                                                                                              TYPE: amino acid
STRANDEDNESS: sir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE
                                                                                                                                                                                                                                                                                  TELEFAX:
                                                                                                                                                                                                                ENGTH:
537 RLOKSOSSDLLERERESVLRREQEVAEERRN 567
                           1 RLOKSOSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2, Application US/09050516 6627414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Abbott Park
                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ħ
                                                                                                                                                                                                               679 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BILLING-MEDEL, PATRICOHEN, MAURICE COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                  847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
VENTION: REAGENTS AND METHODS USEFUL
VENTION: POR DETECTING DISEASES OF THE GASTROINTESTINAL
VENTION: TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HAYDEN, MARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GRANADOS,
                                                               Conservative
                                                                                                                                                                               single
                                                              100.0%; Score 146; DB 2;
100.0%; Pred. No. 2.7e-111
/ative 0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                   08/828,855
                                                                                                                                                                                                                                                                                                                                              35,441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PATRICIA
                                                                                                                                                                                                                                                                                                                                6065.US.P1
                                                                 0
                                                                                                Length 679;
                                                                 Indels
                                                                 0
                                                                 Gaps
                                                                   0
```

```
RESULT 7
US-09-540-236-3120
                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                   श
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-278-547-42
GENERAL INFORMATION:
APPLICANT: Gary L. Breton et al.
APPLICANT: OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO MORAXELLA CATAR
TITLE OF INVENTION: FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 2709.2005-001
CURRENT APPLICATION NUMBER: US/09/540,236
CURRENT FILING DATE: 2000-04-04
NUMBER OF SEQ ID NOS: 3840
SEQ ID NO 3120
                                                                                                                                                                                    Sequence 3120, Application US/09540236 Patent No. 6673910
                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 42:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:

APPLICATION UNMBER: US/09/050,516

PILING DATE: <Unknown:
APPLICATION NUMBER: 08/828,855

FILING DATE: 31-MAR-1997

ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441

REFERENCE/DOCKET NUMBER: 6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: NO. 6660834e
SEQUENCE DESCRIPTION: SEQ ID NO: 42:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: line MOLECULE TYPE: No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF
                                                                                                                                                                                                                                                                                                                 537
                                                                                                                                                                                                                                                                                                                                                                                             31;
                                                                                                                                                                                                                                                                                                                                        1 RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
                                                                                                                                                                                                                                                                                                               RLQKSQSSDLLERERESVLRREQEVAEERRN 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE: IL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DRESSEE: Abbott Laboratories
                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GRANADOS, EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HODGES, STEVEN C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KLASS, MICHAEL R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MARK
                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                 Score 146; DB 2;
Pred. No. 2.7e-11;
                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 679;
                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                             0,
```

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; ORGANISM: M.catarrhalis
US-09-540-236-3120
밁
                        5
                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 9
US-08-681-219A-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 8
US-10-092-138A-26
                                                                                                                        US-08-681-219A-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-092-138A-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Sato, Taka-Aki
TITLE OF INVENTION: METHOD OF PREPARING A PROTEIN ARRAY BASED ON
TITLE OF INVENTION: BIOCHEMICAL PROTEIN-PROTEIN INTERACTION
FILE REFERENCE: 65823/JPM/PT
CURRENT APPLICATION NUMBER: US/10/092,138A
CURRENT FILING DATE: 2002-03-06
NUMBER OF SEQ ID NOS: 34
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 26
                                                                                                                                                                                   FILE REFERENCE: 48962
CURRENT APPLICATION NUMBER: US/08/681,219A
CURRENT FILING DATE: 1996-07-22
NUMBER OF SEQ ID NOS: 37
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 26
                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Sato, Ta
APPLICANT: Yanagis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 26, Application US/10092138A Patent No. 6743630 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                          Sequence 26, Application US/08681219A Patent No. 6911526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                            Matches
                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                TITLE OF INVENTION: COMPOUNDS THAT INHIBIT THE I TITLE OF INVENTION: SIGNAL-TRANSDUCING PROTEINS TITLE OF INVENTION: DOMAIN AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 32
                                                                                                                                       TYPE: PRT
ORGANISM: human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 828
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: human
                                                                                                                                                                        LENGTH: 828
                                                                           local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ocal Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  134 QLAKIQEQERLEQERLENERREQERLEQER 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        38
38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14; Conservative
                                                            14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 RLOKSOSSDLLERERESVLRREGEVAEERR 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 RLQKSQSSDLLERE----RESVLRREQEVAEER 29
                   RLQKSQSSDLLERE-----RESVLRREQEVAEER 29
RLQQTEREDLLEKKLAKAQCEQSHLMREHEDVQER 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RLQQTEREDLLEKKLAKAQCEQSHLMREHEDVQER
                                                                                                                                                                                                                                                                                                                               Yanagisawa, Junn
                                                          Conservative
                                                                                                                                                                                                                                                                                                                                              Taka-Aki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    38.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              38.4%;
                                                                           38.4%;
40.0%;
                                                          Score 56; DB
Pred. No. 25;
7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 56; DB 2;
Pred. No. 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 56;
Pred. No. 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2; Length 322;
8.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                            8
                                                                                                                                                                                                                                                                                                INTERACTION BETWEEN AND THE GLGF (PDZ/I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 828;
                                                                                         Length 828;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6;
                                                            6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                  (PDZ/DHR)
                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                            1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
US-09-248-796A-18714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 11
                                                                                                                                                                                                                                                                                                                                                                    ; ORGANISM: Human
US-09-949-016-8508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-949-016-8508
                                                                                                                                    US-09-543-681A-6489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: US 60/096,409
PRIOR FILING DATE: 1998-08-13
NUMBER OF SEQ ID NOS: 28208
SEQ ID NO 18714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 18714, Application US/09248796A Patent No. 6747137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
GENERAL INFORMATION:
APPLICANT: GARY BRETON
TITLE OF INVENTION: NUCLEIC ACID
TITLE OF INVENTION: DIAGNOSTICS
PILE REFERENCE: 2709.1002-001
                                                                                            Sequence 6489, Application US/09543681A Patent No. 6605709
                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: Fas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 8508, Application US/09949016 Patent No. 6812339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -09-248-796A-18714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/248,796A CURRENT FILING DATE: 199-02-12 PRIOR APPLICATION NUMBER: US 60/074,725 PRIOR FILING DATE: 1998-02-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: 107196.132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Keith Weinstock et al
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO CANDIDA ALBICAN
TITLE OF INVENTION: FOR DIAGNOSTICS AND THERAPEUTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/231,498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE: CL001307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Candida albicans
                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ENGTH: 513
                                                                                                                                                                                                                                                                                                                                                                                                                            ENGTH: 461
                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             110 RIQNEQVEELIRKEKERIRLELERKREEEERR 142
                                                                                                                                                                                                              43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 RLOKSOSSDLLERERESV---LRREGEVAEERR 30
                                                                                                                                                                                                                                                  3 OKSOSSDLIERERESV----LRREGEVAEERR 30
                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FastSEQ
                                                                                                                                                                                                          QQLEEEKLLERERERLHEEWLLREQKAQEEFR 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000-10-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       38.0%;
                                                                                                                                                                                                                                                                                                            37.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 55.5;
Pred. No. 17;
                                                                                                                                                                                                                                                                                                            Score 55; DB 2;
Pred. No. 18;
                      AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches 10;
                                                                                                                                                                                                                                                                                            Mismatches
                        AMINO ACID SEQUENCES RELATING TO PROTEUS MIRABII THERAPEUTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                                                                                                                                Length 461;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 513;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ۲,
                                                                                                                                                                                                                                                                                            7:
                                              밁
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; ORGANISM: Proteus mirabilis US-09-543-681A-6489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-056-200-94
                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 8344
SEQ.ID NO 6489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 94, Application US/08056200
                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/543,681A
CURRENT FILING DATE: 2000-04-05
PRIOR APPLICATION NUMBER: US 60/128,706
PRIOR FILING DATE: 1999-04-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                     TELEFAX: (714) 760-95
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 737
                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                 REGISTRATION NUMBER: 36,799
REFERENCE/DOCKET NUMBER: NIH054.001A
TELECOMMUNICATION INFORMATION:
TELEPHONE: (714) 760-0404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: Fedrick, Michael F
                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IIILE OF INVENTION: Trichohyalin and Transglutaminase-3 and
IIILE OF INVENTION: Mehods of Using Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                         MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                         OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Dalam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
les 12; Conserv
                                                                                                                                                                                                                                                                                                                                                FILING DATE: 30 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET:
                                                                           Local
                                                                                                                                                         TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
                                                                                                                                                                                     LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               324 RVNRARELEIVAREREVELQRIEKEKALEEERKN 357
677 RIKREEEEERIEQRIKREHEEE-RREQELAEEEQ 709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              92660
                            1 RIOKSOSSDILE----RERESVIRREQEVAEERR 30
                                                                       37.3%;
Similarity 44.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Newport Beach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RLQKSQSSDLLERERESVLRR---EQEVABERRN 31
                                                                                                                                                                     amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ς
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E: Knobbe, Martens, Olson & Bear
620 Newport Center Drive, Sixteenth Floor
                                                                                                                                                                                     1898 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chung, Soo-11
Park, Sang-Chul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lee, Seung-Chul
Kim, In-Gyu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Steinert, Peter M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                              30-APR-1993
                                                                                                                                                                                                                                     760-9502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               37.3%;
                                                                                                                                                                                                                                                                                                                                                                                 US/08/056,200
                                                                                                                                                                                                                        94:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 54.5;
Pred. No. 35;
                                                                          Score 54.5;
Pred. No. 98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                   Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2;
                                                                                            DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 737;
                                                                                              Length 1898;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω
--
                                                                  υ
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                  Gaps
```

```
RESULT 15
US-09-538-092-1280
                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-800-644-94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
US-08-800-644-94
           GENERAL INFORMATION:
APPLICANT: Giot, Loic
APPLICANT: Mansfield, Traci A.
TITLE OF INVENTION: Protein-Protein Complexes and Method of Using Same
FILE REFERENCE: 15966-542
CURRENT APPLICATION NUMBER: US/09/538,092
CURRENT FILING DATE: 2000-03-29
PRIOR APPLICATION NUMBER: 60/127,352
PRIOR APPLICATION NUMBER: 60/127,352
PRIOR FILING DATE: 1999-04-01
PRIOR APPLICATION NUMBER: 60/178,965
PRIOR FILING DATE: 2000-02-01
NUMBER OF SEQ ID NOS: 1387
                                                                                                                                                                                                                                                                                   Sequence 1280, Application US/09538092 Patent No. 6753314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Steinert
APPLICANT: Lee, Set
APPLICANT: Kim, In-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 94, Appli
Patent No. 5958752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/08/800,644
FILING DATE: 14-FEB-1997
CCLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/056,200
FILING DATE: 30-APR-1993
ATTORNEY/ACENT INFORMATION:
NAME: Fedrick, Michael F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPAX: (714) 760-9502
INFORMATION FOR SEQ ID NO: 94:
SEQUENCE CHARACTERISTICS:
LENGTH: 1898 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REGISTRATION NUMBER: 36,799
REFERENCE/DOCKET NUMBER: NIH054.001A
TELECOMMUNICATION INFORMATION:
TELEPHONE: (714) 760-9404
TELEPAX: (714) 760-9502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIOM TYPE: Ploppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Park, Sang-Chul
TITLE OF INVENTION: Trichohyalin and Transglutaminase-3 and
TITLE OF INVENTION: Mehods of Using Same
NUMBER OF SEQUENCES: 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match 37.3%;
Local Similarity 44.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Newport Beach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                           677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 RLQKSQSSDLLE----RERESVLRREQEVAEERR 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 92660
CuraPatSeqFormatter Version 0.9
                                                                                                                                                                                                                                                                                                                                                                                                                      RIKREEEERLEQRIKREHEEE-RREQELAEEEQ 709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E: Knobbe, Martens, Olson & Bear
620 Newport Center Drive, Sixteenth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/08800644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chung, occ
Park, Sang-Chul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Steinert, Peter M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kim, In-Gyu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 54.5; DB 1; Length 1898; Pred. No. 98; 6; Mismatches 8; Indels 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
```

```
; FEATURE:
, NAME/KEY: misc feature
; LOCATION: (0)...(0)
; OTHER INFORMATION: Polypeptide Accession Number Q07283
US-09-538-092-1280
                                                                                                                                                                                                                 SEQ ID NO 1280
LENGTH: 1898
                                                         Matches
                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                      ORGANISM: Homo sapiens
                                                                                                                                                                                                      TYPE: PRT
677 RIKREEEEERIEQRIKREHEEE-RREQELAEEEQ 709
                                                         15;
                            1 RLQKSQSSDLLE----RERESVLRREQEVAEERR 30
                                                         Conservative
                                                                    37.3%;
                                                         6; Mismatches
                                                                     Score 54.5;
Pred. No. 98;
                                                                                      DB 2;
                                                         8
                                                                                     Length 1898;
                                                           Indels
                                                         5
                                                         Gaps
```

2

Search completed: March Job time : 5.3241 secs

3, 2006, 13:38:53

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score
58.59
58.59
56.57
56.57
56.57
56.57
56.57
56.57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-646-873-44
146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      March 3, 2006, 14:09:14; Search time 13.6171 Seconds (without alignments) 951.209 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1867569 seqs, 417829326 residues
                                                                                                                                                                                                                                                                                                                            100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40.1
39.7
39.7
39.0
39.0
38.7
38.7
38.4
                                                                                                                                                                                                                                                                   446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenCore version 5.1.7 Copyright (c) 1993 - 2006 Biocceleration Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                        1439
1407
1407
689
524
894
161
1893
1893
1893
2193
322
                                                                                                                                                                                                                                                                                                                                                    215
215
215
679
679
679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 띪
                 US-10-106-698-4761
US-10-754-079-157
US-10-752-115-367723
US-10-732-923-359
US-10-732-923-19024
US-11-077-143-14634
US-11-097-143-21003
US-11-097-143-21003
US-11-097-143-6279
US-10-424-599-177673
US-11-097-143-6279
US-10-425-115-358829
US-10-425-114-57370
US-10-437-963-147007
US-10-437-963-111187
US-10-437-963-111187
                                                                                                                                                                                                                                                                                                                                                                 US-09-050-516-44
US-10-278-547-44
US-10-646-873-44
US-09-050-516-47
US-09-050-516-47
US-10-646-873-47
US-10-646-873-47
US-10-646-873-42
US-10-646-873-42
US-10-646-873-42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1867569
                                                                                                                                                                                                                                                                 Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Description
                                                                              sequence
sequence
sequence
sequence
sequence
sequence
sequence
                                                                                                                                                                                                                           Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                        Sequence
                                                               Sequence
177876,
6279, Ap
158829,
158829,
57370, A
57370, A
63265, A
111187,
28, Appl
                                                                                                                                                                                      44, Appl
44, Appl
47, Appl
47, Appl
47, Appl
42, Appl
42, Appl
42, Appl
42, Appl
42, Appl
4761, Appl
157, 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 1
```

Result No.

4.	4.		4.	4	.4	ω	w	u	w	w	34	ω	w	ω	ىيا	ر.	N
S	4	ω	N	_	0	9	œ	7	6	U	4.	w	N	_	0	9	80
54	54	54.5	54.5	55	55	IJ U	55	55	55	55	55	55	55.5	56	56	<u>თ</u>	56
37.0	37.0	37.3	37.3	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	38.0	38.4	38.4	38.4	38.4
166	165	274	105	1391	1100	827	691	527	478	224	224	143	500	985	985	828	828
IJ	4	4	4	4.	Uī	4.	4.	ഗ	4.	4	4	u	4	σ	σ	u	4
US-10-473-127-1945	US-10-425-115-233920	US-10-767-701-38902	US-10-425-115-248030	US-10-437-963-128235	US-10-494-940-22	US-10-437-963-152005	US-10-369-493-20148	US-10-450-763-51352	US-10-437-963-142690	US-10-408-765A-2501	US-10-094-749-2506	US-10-450-763-51348	US-10-032-585-7588	US-11-097-143-27048	US-11-097-143-17463	US-10-820-403-26	US-10-092-138-26
Sequence 1	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence 1	Sequence	Sequence :	Sequence 1			-	Sequence	Sequence 2	Sequence	Sequence	Sequence 2
1945, Ap	233920,	38902, A		128235,	22, App1	152005,	20148, A	51352, A	142690,	2501, Ap	2506, Ap	•	7588, Ap		17463, A	26, App1	

# ALIGNMENTS

SEQUENCE CHARACTERISTICS:

```
RESULT 2
US-10-278-547-44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ર
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-050-516-44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 44, Application US/10278547
Publication No. US20030082619A1
GENERAL INFORMATION:
APPLICANT: BILLING-MEDEL, PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 31; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
                                                                                                              TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 44:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 31 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY:
                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
PILING DATE: <UNknown-
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
TOPOLOGY: linear MOLECULE TYPE: No. US20030082619Ale SEQUENCE DESCRIPTION: SEQ ID NO: 44:
                                                                                                                                                                                           NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
TELECOMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOPTWARE: PSEUSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 RLOKSOSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/10/278,547 FILING DATE: 23-Oct-2002 CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Abbott Laboratories STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                        STRANDEDNESS: single
                                                                        TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE: IL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Abbott Park
                                                                                                                                                                           TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/10278547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
3: No. US20010010904A1e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COLPITS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GRANADOS, EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COHEN, MAURICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 146; DB 3;
Pred. No. 8.4e-11;
                                                                                                                                                                                                                                   6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 3; Length 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
```

```
TOPOLOGY: Inear

HOLECULE TYPE: No. US20040043406A1e
SEQUENCE DESCRIPTION: SEQ ID NO: 44:
US-10-646-873-44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-278-547-44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-646-873-44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 44, Application US/10646873 Publication No. US20040043406A1 GENERAL INFORMATION:
Query Match 100.0%; Score 146; DB 4
Best Local Similarity 100.0%; Pred. No. 8.4e-1
Matches 31; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 44:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version 2.0
CURRENT APPLICATION NUMBER: US/10/646,873
PILING DATE: 22-Aug-2003
CLASSIFICATION OPERA:
APPLICATION NUMBER: US/09/050,516
PRIOR APPLICATION NUMBER: US/09/050,516
PILING DATE: 30-MAR-1999
APPLICATION NUMBER: 08/828,855
PILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                     NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: BILLING-MEDEL, PATRICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 RLQKSQSSDLLERERESVLRREQEVABERRN 31
                                                                                                                                                                                           LENGTH: 31 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY: USA
                                                                                                                                                                                                                                                                                                        TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GORDON, JULIAN GRANADOS, EDWA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COHEN, MAURICE COLPITTS, TRACEY L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 146; DB 4; Length 31; 100.0%; Pred. No. 8.4e-11; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EDWARD N.
                                            DB 4;
                                        Length 31;
  Indels
  <u>.</u>.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

RLQKSQSSDLLERERESVLRREQEVAEERRN 31

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-050-516-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 4
밁
                           ঠ
                                                               Query Match
Best Local S
Matches 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent No.
                                                                                                                                                                                                             NFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 215 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                              NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/8:
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                               MOLECULE TYPE: No. US20010010904Ale
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PPLICANT
                                                                                                                                                                LENGTH: 215 amino acids TYPE: amino acid STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION:
                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INVENTION:
                      RLQKSQSSDLLERERESVLRREQEVAEERRN 31
   RIOKSOSSDILERERESVIRREQEVAEERRN 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/09050516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     E: Abbott Laboratories
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
                                                                                                                                                                                                                                                                                  847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BILLING-MEDEL, PATRICIA
COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
                                                              100.0%; Score 146; DB 3; llarity 100.0%; Pred. No. 6.6e-10; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HODGES, STEVEN C.
KLASS, MICHAEL R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AYDEN, MARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .0010904A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF THE GASTROINTESTINAL TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                   08/828,855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US/09/050,516
                                                                                                                                                                                                                                                   47:
                                                                                                                                                                                                                                                                                                                                    6065.US.P1
                                                                                                  Length 215;
                                                                   Gaps
                                                                     0
```

RESULT 5

US-10-646-873-47

Sequence 47, Applicati Publication No. US2004 GENERAL INFORMATION:

Application US/10646873

APPLICANT: BILLING-MEDEL, PATRICIA COHEN, MAURICE

RESULT 6

```
US-10-278-547-47
밁
                                       ફ
                                                                                                                                                                 US-10-278-547-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 47, Application US/10278547 Publication No. US20030082619A1
                                                                                                                       Query Match
                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                              TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: <Unknown>
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                    TOPOLOGY: linear MOLECULE TYPE: No. US20030082619A1e SEQUENCE DESCRIPTION: SEQ ID NO: 47:
                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 49
  73
                                       1 RLOKSOSSDLLERERESVLRREQEVAEERRN 31
  RLQKSQSSDLLERERESVLRREQEVALERRN 103
                                                                                                                                                                                                                                                    STRANDEDNESS: single
                                                                                                                                                                                                                                                                         TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                         ENGTH: 215 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BILLING-MEDEL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HODGES, STEVEN C.
KLASS, MICHAEL R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GRANADOS, EDWARD N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100 Abbott Park Road
                                                                              100.0%; Score 146; DB 4;
100.0%; Pred. No. 6.6e-10;
ative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PATRICIA
                                                                                                                            Length 215;
                                                                                       0
```

```
RESULT 7
US-09-050-516-42
                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                       გ
                                                                                                                                                                                                                                                                                                                                                                                             US-10-646-873-47
                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                          Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear MOLECULE TYPE: No. US20040043406Ale SEQUENCE DESCRIPTION: SEQ ID NO: 47:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 600
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: 30-MAR-1998
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/ACENT IMPORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                           73
                                                                                                                                                                                                                                                                                                                          31;
                                                                                                                                                                                                                                                                           1 RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
STATE: IL
                                                                                                                                                                                                                                                       RLQKSQSSDLLERERESVLRREQEVAEERRN 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/10/646,873 FILING DATE: 22-Aug-2003 CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: FastSEQ for Windows Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM Compatible OPERATING SYSTEM: DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY: USA
               BILLING-MEDEL, PATRICIA COHEN, MAURICE COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN GRANADOS, EDWARD N. HAYDEN, MARK
                                                                                                                                                                                                                                                                                                                        100.0%; Score 146; DB 4; llarity 100.0%; Pred. No. 6.6e-10; Conservative 0; Mismatches 0;
HAYDEN, MARK
HODGES, STEVEN C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GRANADOS, EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6065.US.P1
                                                                                                                                                                                                                                                                                                                                                        Length 215;
                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                          0
```

```
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: No. US20010010904A1e
US-09-050-516-42
                                                                                                                                                                                                                                                                                         RESULT 8
US-10-278-547-42
                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                         Sequence 42, Appropriation No.
                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
PRIOR APPLICATION DATA:
PRIOR APPLICATION UNMBER: 08/828
APPLICATION UNMBER: 1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,44
                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 60064-3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ENGTH:
HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
TRACT
NUMBER OF SEQUENCES: 49
                                                                                                                                                                                                    APPLICANT: BILLING-MEDEL, PATRICIA COHEN, MAURICE
                                                                                                                                                                                                                                                                                                                                                               537
                                                                                                                                                                                                                                                                                                                                                                                                                              31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                 RLQKSQSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                             RLQKSQSSDLLERERESVLRREQEVAEERRN 567
                                                                                                                                                                                                                                                       Application US/10278547 to. US20030082619A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              679 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3: Abbott Laboratories
100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 146; DB 3; ilarity 100.0%; Pred. No. 2.2e-09; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KLASS, MICHAEL R. KRATOCHVIL, JON D. ROBERTS-RAPP, LISP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IBM Compatible
                                                                                                                                                 COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
                                                                                                                                         GRANADOS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF THE GASTROINTESTINAL TRACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STEPHEN D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ЈОНИ C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        08/828,855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  35,441
                                                                                                                                       EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LISA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     42:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 679;
                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

CORRESPONDENCE ADDRESS:

ADDRESSEE: Abbott Laboratories

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                           US-10-646-873-42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-278-547-42
                                                                                                                                                                                                                                                                                                                                                                        Sequence 42, Appropriate Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 42:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/09/050,516
PILING DATE: «Unknown»
APPLICATION UNMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                              CORRESPONDENCE ADDRESS:
CORRESPONDENCE ADDRESS: Abbott Laboratories
STREET: 100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: NO. US20030082619A1e SEQUENCE DESCRIPTION: SEQ ID NO: 42:
                                                                                                                                          TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     537 RLQKSQSSDLLERERESVLRREQEVAEERRN 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 RLOKSOSSDLLERERESVLRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/10/278,547 FILING DATE: 23-Oct-2002 CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: PASESSO for Windows Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: 100 Abbott Park Road CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 679 amino acids
                                 CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                    Application US/10646873
to. US20040043406A1
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60064-3500
                                                                                                                                                                                                                                                                                                                      BILLING-MEDEL, PATRICIA COHEN, MAURICE
                                                                                                                                                                                                                                                                                 FRIEDMAN, PAULA N.
                                                                                                                                                                                                                                                   Granados,
                    끔
                                                                                                                                                                             RATOCHVIL, JON D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                            MICHAEL R.
                                                                                                                                                                                                                                                                  JULIAN
                                                                                                                                                                                                                                                 EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 146; DB 4;
Pred. No. 2.2e-09;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>.</u>.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
TOPOLOGY: linear;

MOLECULE TYPE: NO. US20040043406Ale
SEQUENCE DESCRIPTION: SEQ ID NO: 42:
US-10-646-873-42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 10
US-10-106-698-4761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
, OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids US-10-106-698-4761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match . 100.0%;
Best Local Similarity 100.0%;
Matches 31; Conservative (
                                                                                                                                                                                                                                                 SOFTWARE: PatentIn Ver. SEQ ID NO 4761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 4761, Application US/10106698 Publication No. US20030109690A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/10/106,698
CURRENT FILING DATE: 2002-03-27
ERIOR APPLICATION NUMBER: PCT/US00/26524
PRIOR FILING DATE: 2000-09-28
PRIOR APPLICATION NUMBER: US 60/157,137
PRIOR APPLICATION NUMBER: US 60/163,280
PRIOR APPLICATION NUMBER: US 60/163,280
                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 1999-11-03
NUMBER OF SEQ ID NOS: 8564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: Colon and Colon Cancer Associated Polynucleotides and Polypeptide FILE REFERENCE: PA005P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 42:
                                            LOCATION: (55) COTHER INFORMATION: Xaa NAME/KEY: MISC FEATURE LOCATION: (116)
                                                                                                                             NAME/KEY: MISC_FEATURE
                                                                                                                                                                                                         TYPB: PRT
                                                                                                                                                              FEATURE:
                                                                                                                                                                                 ORGANISM: Homo sapiens
                                                                                                                                                                                                                              ENGTH: 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FRANCISC FOR WINDOWS Version 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        537 RLOKSOSSDLLERERESVLRREQEVAEERRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RLQKSQSSDLLERERESVLRREQEVABERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/10/646,873
PILING DATE: 22-Aug-2003
CLASSIFICATION: «Unknown»
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/09/050,516 FILING DATE: 30-MAR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 679 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEPHONE: 847/935-1729
                                                                                       equals any of the naturally occurring L-amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 146; DB 4;
Pred. No. 2.2e-09;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6065.US.P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>.</u>.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
```

0

Query Match

```
US-10-425-115-367723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-754-079-157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                           Sequence 367723, Application US/10425115 Publication No. US20040214272A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 157
                                                                                      NUMBER OF SEQ ID NOS: 369326
SEQ ID NO 367723
                                                                                                                          APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and
TITLE OF INVENTION: Plants
FILE REFERENCE: 38-21(5322)B
CURRENT APPLICATION NUMBER: US/10/425,115
CURRENT FILING DATE: 2003-04-28
                                                                                                                                                                                                                                                                                     APPLICANT: La Rosa, Thomas J. APPLICANT: Kovalic, David K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILE REFERENCE: 467392000222
CURRENT APPLICATION NUMBER: US/10/754,079
CURRENT FILING DATE: 2004-01-07
PRIOR APPLICATION NUMBER: US 10/155,922
PRIOR FILING DATE: 2002-05-23
PRIOR APPLICATION NUMBER: PCT/JP01/04691
PRIOR FILING DATE: 2001-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ublication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Takebe, Kyoko
TITLE OF INVENTION: OLIGOPEPTIDES FOR PROMOTING HAIR GROWTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: JP 2003-1891 PRIOR FILING DATE: 2003-01-08
TYPE: PRT
ORGANISM: Zea mays
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Mus Musculus
                                                                    ENGTH: 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OR APPLICATION NUMBER: JP 2001-347340
OR FILING DATE: 2001-11-13
OR APPLICATION NUMBER: JP 2001-347338
OR FILING DATE: 2001-11-13
OR APPLICATION NUMBER: JP 2001-371175
OR FILING DATE: 2001-12-05
OR APPLICATION NUMBER: JP 2001-371336
OR APPLICATION NUMBER: JP 2001-371336
OR FILING DATE: 2001-12-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: JP 2000-166903
FILING DATE: 2000-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        218 RIOKRROEEIREPLIRRDIEIRREOEIRREOEIROEOR 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 RLQKSQSSDL-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RLOKSOSSDILERERESVIRREQEVXEERRN 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RLOKSOSSDILERERESVIRREQEVAEERRN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/10754079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US20050008602A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2003-01-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               46.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LERERESVIRREQEVALERR 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 68; DB 5; Length 1439; Pred. No. 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 142; DB 4; Length 172; Pred. No. 1.6e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. 1.68
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                       Other Molecules Associated With
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
CURRENT APPLICATION NUMBER: US/10/732,923; CURRENT FILING DATE: 2003-12-10; PRIOR APPLICATION NUMBER: 10/310,154; PRIOR FILING DATE: 2002-12-04; NUMBER OF SEQ ID NOS: 24149; SEQ ID NO 19024; LENGTH: 527; TYPE: PRT; ORGANISM: Drosophila melanogaster US-10-732-923-19024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 3359, Application US/10732923

Publication No. US20050108791A1

GENERAL INFORMATION:

APPLICANT: Edgerton, Michael D

TITLE OF INVENTION: TRANSGENIC PLANTS WITH IMPROVED PHENOTYPES

FILE REFERENCE: 38-15(52796)C

CURRENT APPLICATION NUMBER: US/10/732,923

CURRENT APPLICATION NUMBER: US/10/732,923

CURRENT FILING DATE: 2003-12-10

PRIOR APPLICATION NUMBER: 10/310,154

PRIOR APPLICATION NUMBER: 10/310,154

PRIOR APPLICATION SERVICE SER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; OTHER INFORMATION: Clone ID: MRT4577_98535C.1.pep US-10-425-115-367723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-732-923-19024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-732-923-3359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-732-923-3359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 19024, Application US/10732923 Publication No. US20050108791A1 GENERAL INFORMATION:
                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Edgerton, Michael D
TITLE OF INVENTION: TRANSGENIC PLANTS WITH IMPROVED PHENOTYPES
FILE REFERENCE: 38-15(52796)C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: unsure
LOCATION: (1)..(293)
OTHER INFORMATION: unsure at all Xaa locations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Oryctolagus cuniculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
nes 12; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1153 LQESEEERLRRQERERKLREEEQLLQER 1180
370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               116 LERERENVROREQE--EQRR 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11 LERERESVLRREQEVAEERR 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 LOKSOSSDLLERERESVLRREQEVASER 29
                                                                 1 RLOKSOSSDL---LERERESVLRREGEVARE 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                         Similarity
RIEQEQQUELERELERQRESDLKAQQEQASE 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                     Conservative
                                                                                                                                                                      40.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         40.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                70.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 59;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 59; DB 5;
Pred. No. 1.8e+02
                                                                                                                                                                      Score 58.5;
Pred. No. 72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                         Mismatches
                                                                                                                                                                                                          DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4
                                                                                                                                                                                                          <u>ა</u>
                                                                                                                                     7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 293;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 1407;
                                                                                                                                         Indels
                                                                                                                                     ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2)
•-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1;
                                                                                                                                     ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
Us-11-097-143-14634
Sequence 14614, US20050208558A1
Sequence 14614, US20050208558A1
Sequence 14614, US20050208558A1
Sequence 14614, US20050208558A1
Semeral inversation.
Seneral ```

Lorie Page Manny (Using)

```
뎧
   Regult
No.
  Minimum DB
Maximum DB
   Scoring table:
   Run on:
   Post-processing: Minimum Match 0%
Maximum Match 10
  Total number of hits satisfying chosen parameters:
  Perfect score:
  protein -
  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
   Score
  56.5
56.5
  53.5
50.5
 seq length: 0
seq length: 2000000000
   protein search, using sw model
  US-10-646-873-44
146
  BLOSUM62
   March 3, 2006, 14:10:51;
   Gapop 10.0 , Gapext 0.5
   135346 ведв,
  1 RLQKSQSSDLLERERESVLRREQEVABERRN 31
  Match Length
   Published_Applications_AA_New: *
   Listing first 45 summaries
  GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
   /cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US11_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US11_NEW_PUB.pep:*
 1197
1297
410
446
537
623
4128
8746
590
590
590
590
590
590
168
835
835
835
   20000420 residues
  멂
               US-10-964-313-14

US-11-202-268-11

US-11-203-73-95-95

US-11-202-268-8

US-11-202-268-4

US-11-202-268-4

US-11-202-268-2

US-11-202-268-2
   US-11-087-099-4004

US-11-087-099-1159

US-11-087-099-4574

US-11-087-099-458

US-11-087-099-3316

US-11-0821-234-1180

US-11-087-099-370
   US-11
US-11
US-11
US-11
   US-11-087-099-10782
US-11-087-099-11126
US-11-087-099-8879
  -202-268-10
   Search time 1.47619 Seconds (without alignments)
420.009 Million cell updates/sec
Sequence 10782, A
Sequence 879, Ap
Sequence 4618, Ap
Sequence 4159, Ap
Sequence 4574, Ap
Sequence 1159, Ap
Sequence 2316, Ap
Sequence 2316, Ap
Sequence 370, App
Sequence 377, Appl
Sequence 10332, Ap
Sequence 10, Appl
Sequence 11, Appl
Sequence 11, Appl
Sequence 14, Appli
Sequence 959, App
Sequence 14, Appli
Sequence 959, App
Sequence 17, Appl
Sequence 18, Appl
Sequence 19, Appl
Sequence 27, Appli
Sequence 27, Appli
Sequence 376, App
Sequence 377, Appl
Sequence 378, App
Sequence 379, App
Sequence 57, App
  Description
   US-11-097-099-10782
Sequence 10782, Application US/11087099
Publication No. US20060041961A1
GENERAL INFORMATION:
   밁
   S
   SEQ ID NO 10782
LENGTH: 166
TYPE: PRT
ORGANISM: Zea mays
                                      ; ORGANISM: Zea mays
US-11-087-099-11126
  US-11-087-099-11126
       Query Match
  Matches
  Query Match
  Local
  Similarity
```

| 45                | 44                | 43              | 42                | 41                | 40                | 9                 | ა<br>8            | 37                | 36                | υ<br>5             | 3.4<br>4.         | ω<br>ω | 32               | 31                  | 30                 | 29                 | 28                 | 27                 | 26               |
|-------------------|-------------------|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|-------------------|--------|------------------|---------------------|--------------------|--------------------|--------------------|--------------------|------------------|
| 47                | 47                | 47              | 47                | 47                | 47                | 47.5              | 47.5              | 47.5              | 47.5              | 47.5               | 48                | 48     | 48               | . 48                | 48                 | 48                 | 48                 | 48                 | 48.5             |
| 32.2              | 32.2              | 32.2            | 32.2              | 32.2              | 32.2              | 32.5              | 32.5              | 32.5              | 32.5              | 32.5               | 32.9              | 32.9   | 32.9             | 32.9                | 32.9               | 32.9               | 32.9               | 32.9               | 33.2             |
| 400               | 400               | 400             | 394               | 93                | 52                | 3712              | 3712              | 2058              | 672               | 280                | 2801              | 2295   | 1905             | 1750                | 605                | 605                | 364                | 319                | 1271             |
| 7                 | 7                 | 7               | 7                 | 7                 | 7                 | 7                 | 7                 | 7                 | 7                 | 7                  | σ                 | 7      | σ                | 7                   | σ                  | σ                  | 7                  | 7                  | 9                |
| US-11-166-892-15  | US-11-047-757-7   | US-11-018-018-7 | US-11-043-752-2   | US-11-226-657-145 | US-11-226-657-146 | US-11-019-711-51  | US-11-019-711-48  | US-11-072-175-188 | US-11-000-463-455 | US-11-072-512-3063 | US-10-330-773-630 | Э.     | US-10-877-346-44 | US-11-087-099-12397 | US-10-973-115B-160 | US-10-131-826A-160 | US-11-087-099-7393 | US-11-087-099-9069 | US-10-770-726-46 |
| Sequence 15, Appi | sequence /, Appri | ,               | Sequence 2, Appli | Sequence 145, App | Sequence 146, App | Sequence 51, Appl | Sequence 48, Appl | Sequence 188, App | Sequence 455, App | -                  |                   | 5450,  | 44,              | 123                 |                    | T60,               | 7393,              | Sequence 9069, Ap  | 46, Ap           |

```
; FEATURE:
, NAME/KEY: unsure
; LOCATION: (1)..(166)
; OTHER INFORMATION: unsure at all Xaa locations
US-11-087-099-10782
   Sequence 11126, Application US/11087099

Publication No. US20060041961A1

GENERAL INFORMATION:
APPLICANT: Abad, Mark S. et al.
TITLE OP INVENTION: Genes and Uses for Plant Improvement
FILE REFERENCE: 38-21(53450)B BP
CURRENT APPLICATION NUMBER: US/11/087,099
CURRENT FILING DATE: 2005-03-22
   NUMBER OF SEQ ID NOS: 12464
SEQ ID NO 11126
LENGTH: 487
TYPE: PRT
  APPLICANT: Abad, Mark S. et al.
TITLE OF INVENTION: Genes and Uses for Plant Improvement
FILE REFERENCE: 38-21(53450)B EP
CURRENT APPLICATION NUMBER: US/11/087,099
CURRENT FILING DATE: 2005-03-22
  NUMBER OF SEQ ID NOS: 12464
  1 RLOKSOSSDILERERESVIRREQEVARER 29
  38.7%; Score 56.5; D
37.9%; Pred. No. 1.8;
ive 11; Mismatches
38.7%;
  Score 56.5;
   DB
    멂
   7;
    7;
  6
   Length 166;
  Length 487;
  Indels
  1;
  Gaps
  1;
```

```
밁
  S
   US-10-467-657-4618
   밁
  5
   밁
   ঠ
  RESULT 5
US-11-087-099-4004
   ; ORGANISM: Neisseria
US-10-467-657-4618
  LENGTH: '502
TYPE: PRT
CRGANISM: Daucus carota
US-11-087-099-8879
   US-11-087-099-8879
  Sequence 8879, Application US/11087099
Publication No. US20060041961A1
GENERAL INFORMATION:
APPLICANT: Abad, Mark S. et al.
TITLE OF INVENTION: Genes and Uses for Plant Improvement
FILE REFERENCE: 38-21 (53450) B EP
CURRENT APPLICATION NUMBER: US/11/087,099
CURRENT FILING DATE: 2005-03-22
NUMBER OF SEQ ID NOS: 12464
SEQ ID NO 8879
GENERAL INFORMATION:
APPLICANT: Abad, Mark S. et al
   PRIOR APPLICATION NUMBER: GB-0103424.8
PRIOR FILING DATE: 2001-02-12
NUMBER OF SEQ ID NOS: 9218
SOFTWARE: SeqWin99, version 1.04
SEQ ID NO 4618
                                  Sequence 4004, Application US/11087099 Publication No. US20060041961A1
  GENERAL INFORMATION:
   Sequence 4618, Application US/10467657 Publication No. US20050260581A1
   Best Local Similarity 37.9%; Paratches 11; Conservative 11;
   Matches
   Best Local Similarity
   Query Match
  Query Match
  APPLICANT: PIZZA Mariagrazia
APPLICANT: MASIGNANI Vega
APPLICANT: MONACI Elisabetta
TITLE OF INVENTION: GONOCOCCAL PROTEINS AND NUCLEIC ACIDS
  CURRENT APPLICATION NUMBER: US/10/467,657
CURRENT FILING DATE: 2003-08-11
  FILE REFERENCE:
  APPLICANT: CHIRON SpA
APPLICANT: FONTANA Maria Rita
   LENGTH: 263
TYPE: PRT
  Match
Local Similarity 42.9%;
tes 12; Conservative
   98 LEKAKTEEML-KEREEALRRKEEELETR 124
   84 RLEKEKAEEMV-RERDEVIRKKEEEIETR 111
  ຫ
   1 RLQKSQSSDLLERERESVLRREQEVAEER 29
   2 LOKSOSSDILERERESVIRREQEVAEER 29
   SQSSDLLERERESVLRREQEVAEERR 30
  SQQQDILQRQREKQLREQMQPEQDVR
  Conservative
  gonorrhoeae
   37.0%;
  ; Score 54; DB; Pred. No. 6.1; 7; Mismatches
  Score 56.5; DB
Pred. No. 6.1;
9; Mismatches
   Pred. No. 5.9;
1; Mismatches
   6.1;
  DB 6;
   6
   6
  Length 263;
  Length 502;
   Indels
   Indels
  1;
   ۲,
  Gaps
   Gaps
   ۲
   1;
```

```
밁
  Ś
  RESULT 6
US-11-087-099-1159
   US-11-087-099-4574
   US-11-087-099-4574
  ; ORGANISM: Lycopersicon esculentum US-11-087-099-1159
   US-11-087-099-4004
  APPLICANT: Abad, Mark S. et al.
TITLE OF INVENTION: Genes and Uses for Plant Improvement
FILE REFERENCE: 38-21(53450)B BP
CURRENT APPLICATION NUMBER: US/11/087,099
CURRENT FILING DATE: 2005-03-22
NUMBER OF SEQ ID NOS: 12464
SEQ ID NO 4574
LENGTH: 451
  GENERAL INFORMATION:
APPLICANT: Abad, Mark S. et al.
APPLICANT: Abad, Mark S. et al.
TITLE OF INVENTION: Genes and Uses for Plant Improvement
FILE REFERENCE: 38-21(53450)B EP
CURRENT APPLICATION NUMBER: US/11/087,099
CURRENT FILING DATE: 2005-03-22
NUMBER OF SEQ ID NOS: 12464
SEQ ID NO 1159
LENGTH: 499
  TITLE OF INVENTION: Genes and Uses for Plant Improvement FILE REFERENCE: 38-21(53450)B EP CURRENT FILING DATE: 2005-03-22 NUMBER OF SEQ ID NOS: 12464 SEQ ID NO 4004 LENGTH: 235
  Sequence 4574, Application US/11087099 Publication No. US20060041961A1 GENERAL INFORMATION:
  Sequence 1159, Application US/11087099 Publication No. US20060041961A1
   Matches
  Matches
  Matches
  Query Match
Best Local (
  Query Match
   Query Match
  TYPE: PRT
ORGANISM: Oryza sativa
FEATURE:
NAME/KEY: unsure
LOCATION: (1)..(235)
OTHER INFORMATION: unsure at all Xaa locations
   ORGANISM: Gibberella fujikuroi
  TYPE: PRT
   TYPE: PRT
   / Match
Local Similarity 42.9%;
nes 12; Conservative
   Local Similarity
  Local Similarity
mes 13; Conserv
  319 KKQEEEEAAQREAEQA-RREEEEAEKRR 345
  10; Conservative
   85
   3 QKSQSSDLLERERESVLRREQEVAEERR 30
QKSQSSDLLERERESVLRREQ---EVAEERR 30
   ||:| :: ::: |||: |:||::|
RLEKEKAEEMV-RERDEVIRRKEE 107
  RLOKSOSSDLLERERESVLRREGE 24
  Conservative
   36.6%;
41.7%;
  34.6%;
  10; Mismatches
   Score 53.5; D
Pred. No. 14;
6; Mismatches
   6;
  4
  Score 50.5;
Pred. No. 30;
   Score 53.5; D
Pred. No. 6.2;
  Mismatches
  몂
   DB 7;
   DB
  7;
   7;
  11;
   9;
  Length 499;
  Length 451;
   Length 235;
  Indels
  u
س
   ۲;
  ۲.
  Gaps
  Gaps
  H
   ۲,
  ۳
```

RESULT 8 US-11-087-099-8238

Sequence 8238, Application US/11087099 Publication No. US20060041961A1

무

619 LERKEKBEABÉRÉRQAKIBABERERKÉKÉBÁBÉK 652

2 LOKSOSSDILERERESVI-----RREQEVAEER 29

-11-072-512-2316

lication US/11072512 RAL INFORMATION:

TAKAO

; TYPE: PRT ; ORGANISM: Candida albicans US-11-087-099-8238

Best Local Similarity

11;

Conservative

10;

Mismatches

34.2%; Score 50; DB 7; 32.4%; Pred. No. 1.1e+02;

Length 1197;

Indels

SEQ ID NO 8238 LENGTH: 1197

1197

GENERAL INFORMATION:
APPLICANT: Abad, Mark S. et al.
APPLICANT: Abad, Mark S. et al.
TITLE OF INVENTION: Genes and Uses for Plant Improvement
FILE REFERENCE: 38-21(53450)B EP
CURRENT APPLICATION UNMBER: US/11/087,099
CURRENT FILING DATE: 2005-03-22
NUMBER OF SEQ ID NOS: 12464

밁

47

KKKEEEEQKQREEEERLHREQLEREAAEEAR 77

```
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-072-512-2316
  APPLICANT: MASUHO, YASUHIKO
TITLE OF INVENTION: Novel full length cDNA
FILE REFERENCE: 08435-0191
CURRENT APPLICATION NUMBER: US/11/072,512
CURRENT FILING DATE: 2005-03-07
PRIOR APPLICATION NUMBER: US 60/350,978
PRIOR FILING DATE: 2002-01-25
PRIOR APPLICATION NUMBER: JP 2001-379298
   PRIOR FILING DATE: 2001-11-05
NUMBER OF SEQ ID NOS: 4096
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 2316
LENGTH: 226
   Query Match
Best Local Similarity
  IRIE, RYOTARO
TAMECHIKA, ICHIRO
SEKI, NAOHIKO
YOSHIKAWA, TSUTOMU
OTSUKA, MOTOYUKI
KSQSSDLLERERESVLRREQEVAEER 29
   SUGIYAMA, TOMOYASU
OTSUKI, TETSUJI
WAKAMATSU, AI
   OTSUKA, KAORU
NAGAI, KEIICHI
  NAGAHARI, KENJI
   ISHII, SHIZUKO
YAMAMOTO, JUN-ICHI
  SATO, HIROYUKI
  SONO,
  YURI
  YUUKO
   33.6%;
   Score 49; DB
Pred. No. 22;
                                    Mismatches
  Length 226;
                                    Indels
                                    <u>.</u>
```

```
밁
   밁
  ; TYPE: PRT; ORGANISM: Homo sapiens
US-10-821-234-1180
   ; TYPE: PRT ; ORGANISM: Arabidopsis thaliana US-11-087-099-370
  US-10-821-234-1180
   밁
   á
  US-11-087-099-370
   RESULT 11
   RESULT 12
US-11-129-442-47
   NUMBER OF SEQ ID NOS: 1704
SOFTWARE: pt_SEQ_genes Version 1.0
SEQ ID NO 1180
   SEQ ID NO 370
LENGTH: 446
  GENERAL INFORMATION:
   Sequence 1180, Application US/10821234 Publication No. US20050255114A1
   Sequence 47, Application US/11129442 Publication No. US20060002951A1 GENERAL INFORMATION:
  GENERAL INFORMATION:
  Matches
   Query Match
   Sequence 370, Appublication No.
  Matches
   Query Match
   CURRENT APPLICATION NUMBER: US/10/821,234
CURRENT FILING DATE: 2004-04-07
PRIOR APPLICATION NUMBER: US 60/462,047
PRIOR FILING DATE: 2003-04-07
   CURRENT APPLICATION NUMBER: US/11/087,099
CURRENT FILING DATE: 2005-03-22
   APPLICANT: Abad, Mark S. e
TITLE OF INVENTION: Genes
   APPLICANT: Tang, Y. Tom
TITLE OF INVENTION: Methods for Diagnosis and Treatment of Preeclampsia
   APPLICANT: Labat
APPLICANT: Stac
  FILE REFERENCE: 38-21 (53450) B EP
  FILE REFERENCE: 821A
TITLE OF INVENTION: Inhibition of the tRNALY83-Primed Initiation of Reverse TITLE OF INVENTION: Transcription in HIV-1 by APOBEC3G FILE REFERENCE: 11168.257
  NUMBER OF SEQ ID NOS: 12464
   APPLICANT: Kleiman, Lawrence
APPLICANT: CEN, Shan
APPLICANT: GUO, Fei
   LENGTH: 410
   Local Similarity
  Match 33.6%;
Local Similarity 39.3%;
   227 EAEQSNVALQREEDRVEQKEAEVGELQR 254
   62 KAQFSQILBEHKAKVTELEQQVAQAK 87
   58 KIEKEKTEDLL-KEKDEILRK-KEVEQEK
  11;
  10;
  3 QKSQSSDLLERERESVLRREQEVAEERR 30
   1 RLOKSOSSDLLERERESVLRREGEVAEER 29
   Andarmani, su
Y Tom
   Stache-Crain, Birgit
   Application US/11087099
o. US20060041961A1
  Conservative
  Conservative
  Mark S. et al.
  Susan
   33.6%; Score 49; DB 7; 34.5%; Pred. No. 46;
   and Uses for Plant Improvement
  7; Mismatches
   Score 49; DE
Pred. No. 42;
  Mismatches
  84
   DB 6; Length 410;
  Length 446;
  Indels
  Indels
  0
  <u>ب</u>
  Gaps
  2
  0
```

```
RESULT 14
US-10-770-726-77
; Sequence 77, Application US/10770726
; Publication No. US20050266409A1
   ; NUMBER OF SEQ ID NOS: 47
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 47
; LENGTH: 537
; TYPE: PRT
; ORGANISM: Muxine leukemia virus
US-11-129-442-47
   밁
  ঠ
  밁
   ঠ
   RESULT 13
US-11-072-512-3378
   GENERAL INFORMATION:
  Query Match
Best Local 9
   Sequence 3378, Application US/11072512 Publication No. US20060029945A1
   Matches
   SEQ ID NO 3378
  Matches
   Query Match
   TYPE: PRT
ORGANISM: Homo sapiens
-11-072-512-3378
   APPLICANT:
APPLICANT:
  PRIOR APPLICATION NUMBER: US 60/350,978
PRIOR FILING DATE: 2002-01-25
PRIOR APPLICATION NUMBER: JP 2001-379298
PRIOR EILING DATE: 2001-11-05
NUMBER OF SEQ ID NOS: 4096
SOFTWARE: Patentin Ver. 2.1
  APPLICANT:
APPLICANT:
APPLICANT:
  APPLICANT:
  CURRENT APPLICATION NUMBER: US/11/129,442
CURRENT FILING DATE: 2005-05-16
   APPLICANT: NAGAHARI, KENJI
APPLICANT: MASUHO, YASUHIKO
TITLE OF INVENTION: Novel full length cDNA
FILE REFERENCE: 008435-0191
CURRENT APPLICATION NUMBER: US/11/072,512
CURRENT FILING DATE: 2005-03-07
  APPLICANT:
  PRIOR APPLICATION NUMBER: CA 2,467,312 PRIOR FILING DATE: 2004-05-14
  APPLICANT:
  APPLICANT:
  APPLICANT:
   APPLICANT:
   APPLICANT:
   APPLICANT:
   APPLICANT:
   APPLICANT:
  LENGTH: 623
  Local Similarity
  292 QKVQMT--LERERRLLLRQSQEQWQEK 316
   14 ERESVLRREQEVAEERR 30
   11; Conservative
   3 QKSQSSDLLERERESVLRREQEVAEER 29
  h 33.6%;
Similarity 48.1%;
  OTSUKI, TETSUJI
WAKAMATSU, AI
SATO, HIROYUKI
  EREERVRRETEEKEERR 454
  ISHII, SHI
YAMAMOTO,
   SEKI, NAOHIKO
YOSHIKAWA, TSUTOMU
OTSUKA, MOTOYUKI
   NAGAI, KEIICHI
IRIE, RYOTARO
TAMECHIKA, ICHIRO
  OTSUKA, KAORU
NAGAI, KEIICHI
   SUGIYAMA,
   SONO,
   Conservative
   YURI
   SHIZUKO
TO, JUN-ICHI
   YUUKO
   TAKAO
  33.6%;
   TOMOYASU
  Score 49; DB 7;
Pred. No. 67;
   Score 49; DB 7;
Pred. No. 57;
1; Mismatches
   5
   Mismatches
   Length 537;
   Length 623;
   Indels
  Indels
   2;
   0
   Gaps
  Gaps
  0
   ۲,
```

```
GENERAL INFORMATION:
APPLICANT: Wyeth
APPLICANT: Brown, Eugene
APPLICANT: Liu, Wei
ITITLE OF INVENTION: COMPOSITIONS AND METHODS FOR
ITITLE OF INVENTION: CANCERS
FILE REFERENCE: AM101079 (031896-010000)
CURRENT APPLICATION NUMBER: US/10/770,726
CURRENT FILING DATE: 2004-02-04
NUMBER OF SEQ ID NOS: 48640
SOFTWARE: PATENTIN VERSION 3.2
SEQ ID NO 77
LENGTH: 4128
TYPE: DET.
   ; TYPE: PRT ; ORGANISM: Homo sapiens US-10-770-726-77
   밁
   Ś
   ; ORGANISM: Lawsonia intracellularis US-11-098-686-10232
  RESULT 15
US-11-098-686-10232
  밁
Search completed: March Job time: 2.47619 secs
  FILE REFERENCE: 09531-128001
CURRENT APPLICATION NUMBER: US/11/098,686
CURRENT FILING DATE: 2005-04-04
PRIOR APPLICATION NUMBER: PCT/US03/31318
PRIOR FILING DATE: 2003-10-01
PRIOR APPLICATION NUMBER: US 60/416,395
PRIOR FILING DATE: 2003-10-04
PRIOR FILING DATE: 2003-10-04
PRIOR FILING DATE: 2003-10-04
PRIOR FILING DATE: 2003-10-04
  SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 10232
  GENERAL INFORMATION
  Sequence 10232, Application US/11098686 Publication No. US20060024696A1
   Query Match
Best Local Similarity
Matches 13; Conserv
   Query Match
Best Local Similarity
Matches 15; Conserv
  APPLICANT: Kapur, Vivek and Gebhart, Connie J.
TITLE OF INVENTION: NUCLEIC ACID AND POLYPEPTIDE SEQUENCES
TITLE OF INVENTION: FROM LAWSONIA INTRACELLULARIS AND METHODS OF USING
   ENGTH:
  1750 LELSOSPMLLELMTEVLCREQOHVMEE 1776
  1213 KLQKKQ----
   1 RLOKSOSSDLLERERESVL----RREQ--EVALERR 30
   8746
   LQKSQSSDLLERERESVLRREQEVAEE 28
   Conservative
   33.6%;
ilarity 48.1%;
Conservative
   -|||:::|
-QRERKTLLAMQRTKQEQLDEIQEERR 1244
                   3, 2006, 14:19:04
   33.6%;
   Mismatches
   8
   Score 49; DB 7;
Pred. No. 1.3e+03;
8; Mismatches 2
  Score 49; DB 6;
Pred. No. 5.6e+02;
   FOR DIAGNOSING, PREVENTING, AND TREATING
   2
   Length 8746;
   Length 4128;
  Indels
  Indels
  12;
  0,
   Gaps
  Gaps
  0
  w
--
```

```
Regult
No.
  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
   Scoring table:
   OM protein -
  Database :
  Minimum DB
Maximum DB
  Searched:
  Sequence:
  Total number of hits satisfying chosen parameters:
  Perfect score:
  9
  score greater
  Pred. No.
   Score
  d. No. is the number of results predicted by chance to have a
re greater than or equal to the score of the result being printed,
is derived by analysis of the total score distribution.
  Bed
Bed
protein search, using sw model
  length: 0
length: 2000000000
  BLOSUM62
Gapop 10.0 , Gapext 0.5
  A_Geneseq_21:*
1: geneseconical
   US-10-646-873-45
175
  March
  2443163 segs, 439378781 residues
100.0
100.0
36.0
33.1
32.3
32.3
32.0
32.0
32.0
   1000.0
  ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
  GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd
  geneseqp2003as:*
geneseqp2003bs:*
geneseqp2004s:*
geneseqp2005s:*
   geneseqp2001s:*
geneseqp2002s:*
  geneseqp1980s:*
geneseqp1990s:*
  geneseqp2000s:*
  Length
  3, 2006, 13:19:17 ;
692
1406
651
124
296
296
   172
215
215
215
215
215
215
679
679
679
  BB
                              ADN17172
ADX97562
ADX66891
ABB71963
ADX75958
ADX34152
  AAW79681
AAE07324
ADA26384
ADN17177
   AAW79679
AAE07322
ADA26382
ADN17175
AAG73987
  占
   AAM78590
ADA26379
   AAM79574
AAW79676
   AAE07319
  ADG14341
   SUMMARIES
  Search time 18.7075 Seconds (without alignments)
  822.038 Million cell updates/sec
  2443163
  Adx97562
Adx66891
  Adn1
  Aag73987 Human
Aaw79681 Human
  Aaw79679
  Description
  Ada26384
  Aae07319
   Aam79574
  \am78590
 Synthetic CS198 pep Human CS1 Human CS1 Synthetic CS198 pro Human pro Human CS Human CS Human CS Human CS Human CS Paredicted CS198 pro Predicted Human NC2 CS198 pro Pant ful Drosophil Plant ful Drosophil Plant ful Drosophil Plant ful Rice abio Rice abio Human POL
   Synthetic
Human CS
```

| 4 4<br>5           | 43       | 42       | 41       | 40       | 39       | 38       | 37       | ა<br>6             | ω<br>5   | კ<br>4   | 33       | 32       | 31       | 30       | 29       | 28       | 27       | 26       | 25       |
|--------------------|----------|----------|----------|----------|----------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| ភ ភ<br>ស           | 53.5     | 53.5     | 54.5     | 54.5     | 54.5     | 54.5     | 54.5     | 55                 | ហ        | 55       | 55       | <u>ي</u> | 55       | 55       | 55       | ភូ       | 55       | 55.5     | 55.5     |
| 30.3               | 30.6     | 30.6     | 31.1     | 31.1     | 31.1     | 31.1     | 31.1     | 31.4               | 31.4     | 31.4     | 31.4     | 31.4     | 31.4     | 31.4     | 31.4     | 31.4     | 31.4     | 31.7     | 31.7     |
| 362                | 701      | 583      | 1158     | 1158     | 1158     | 1158     | 1158     | 1277               | 1277     | 958      | 958      | 958      | 942      | 789      | 679      | 581      | 406      | 531      | 346      |
| 7 1                | 0        | 4.       | 9        | ø        | 7        | 7        | ហ        | 7                  | σ        | 7        | 7        | 7        | 4        | 4        | σ        | œ        | 4        | 7        | 7        |
| ABO68987           | ABU34205 | ABG04816 | ADX07618 | ADV97639 | ADD18978 | ADD14177 | ABB97465 | ADK62414           | ABR52893 | ADJ69962 | ADF74176 | ADE71272 | AAM39949 | AAM41735 | ABU50304 | ADX77236 | ABB60211 | ADM04077 | ADM04107 |
| Abo68987 Pseudomon |          |          |          | _        | Human    |          | _        | Adk62414 Disease t |          | Human ne |          | Novel    | Human    | Humai    | Proter   | -        | dosord   | _        | Human    |

### ALIGNMENTS

RESULT 1
AAW79679
ID AAW7
XX
AC AAW7
XX
AC 11-J
XX Gastrointestinal tract; GI tract; cancer; disease; detection; CS198; human; predisposition; treatment; Barret's oesophagus; gastric ulcer; gastritis; leiomyoma; polyps; Crohn's disease; ulcerative colitis; AAW79679 standard; protein; 35 Synthetic CS198 derived peptide #3 11-JAN-1999 AAW79679; 31-MAR-1997; 08-OCT-1998 WO9844159-A1 Synthetic. pancreatitis. 30-MAR-1998; (first entry) 97US-00828855 98WO-US006251 Ŗ

(ABBO ) ABBOTT LAB

Billing-Medel PA, Cone.... Granados EN, Hayden M, Hodo M, Colpitts TL, Friedman PN, Gordon J; Hodges SC, Klass MR, Kratochvil JD; JC, Stroupe SD;

WPI; 1998-542714/46.

New gastrointestinal polynucleotides, CS198, and their detection - used for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastritis.

Claim 26; Page 103; 127pp; English.

AAW79677-W79680 are synthetic CS198 derived peptide fragments which are used in a method to detect the presence of a target human CS198 polynucleotide in a test sample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be used in detecting, diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oesophagus, gastric ulcer, leiomyoma, polyps, cancer, Barret's oesophagus, Crohn's disease, ulcerative

```
RESULT 2

AAE07322

ID AAE07322

AAE07322

AAE07322

AAE0

A
   밁
   Ś
   SXC
  Matches
  Query Match
Best Local Similarity
The CS 198 polynucleotides, polypeptides and antibodies are useful for detecting, diagnosing, staging, monitoring, prognosticating, preventing, treating or determining, predisposition to diseases and conditions of the GI tract such as cancer, gastric ulcer, gastritis, Crohn's disease, ulcerative colitis, pancreatitis and Barret's oesophagus. The CS 198 polypeptides are useful as standards or reagents in diagnostic
  The invention relates to a method of detecting the presence of a target CS 198 polymucleotide comprising contacting the test sample with at least one CS 198 specific polymucleotide. The method is useful for detecting diseases of the gastrointestinal (GI) tract organs, particularly cancer.
   Claim 17;
   Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, comprises contacting test sample with at least one CS 198-specific polynucleotide.
  WPI; 2001-496163/54.
   Granados EN,
   Billingel PA,
  (HAYD/)
(HODG/)
(KLAS/)
   (COTE/)
(COHE/)
   31-MAR-1997;
  30-MAR-1998;
   02-AUG-2001.
  US2001010904-A1
   Homo sapiens
  Barret's oesophagus; gene therapy;
  CS 198; gastrointestinal tract disease; GI tract; cancer; gastric ulcer; gastritis; Crohn's disease; ulcerative colitis; pancreatitis;
   Human CS 198
  06-NOV-2001
   AAE07322;
   AAE07322 standard; peptide;
  Sequence 35 AA;
  colitis, and pancreatitis
   Roberts-Rapp L,
   ROBE/)
   (KRAT/)
  GRAN,
   (FRIE/)
   35;
   HAYDEN M.
HODGES S C.
   KRATOCHVIL J I
ROBERTS-RAPP I
RUSSELL J C.
STROUPE S D.
  GORDON J.
GRANADOS E N.
   BILLINGEL P A.
  KLASS M R.
  COLPITTS T L. FRIEDMAN P N.
  COHEN
   ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
  ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
  Page 52; 68pp;
  Conservative
   , Cohen M,
Hayden M,
L, Russell
  peptide
  (first
   97US-00828855
  98US-00050516.
  entry)
  100.0%;
   #3.
   English.
   Colpitts TL, Friedman Hodges SC, Klass MR, JC, Stroupe SD;
   0
  Score 175; DB 2;
Pred. No. 5.1e-17;
  Mismatches
  gurb
   Friedman
  screening; human
   35
  35
   0
   PN, Gordon J;
Kratochvil JD;
   Length 35;
  Indels
   ٥.
   Gaps
   0
```

```
88888888888888
   밁
  S
  Query Match
Best Local 9
   Matches
  immunoassays, as components or as target sites for various therapies. Antibodies directed against at least one epitope contained within these polypeptides are useful as delivery agents for therapeutic agents, in diagnostic tests and for screening for conditions or diseases associated with CS 198, particularly cancer. Monoclonal antibodies may also be used for the generation of chimeric antibodies for therapeutic use. The CS 198 polynucleotide is also useful in gene therapy and drug screening. The method of the invention provides an alternative, non-surgical diagnostic method capable of detecting early stage GI tract disease such as cancer. The present sequence is a peptide derived from human CS 198 polypeptide
   cancer prognosticating; cancer prevention; can
gastrointestinal tract disorder; gene therapy.
   Billingel PA,
Granados EN,
  (BILL/)
(COHE/)
(COLP/)
(FRIE/)
(GORD/)
(GRAN/)
   Synthetic;
   Synthetic peptide based
   ADA26382 standard;
  Sequence
  31-MAR-1997;
30-MAR-1998;
   CS198; cancer diagnosis; cancer staging; cancer monitoring;
  20-NOV-2003
  ADA26382,
  consensus sequence
   WPI; 2003-596961/56.
   Roberts-Rapp
   (ROBE/)
   (HAYD/)
(HODG/)
(KLAS/)
  23-OCT-2002; 2002US-00278547.
   01-MAY-2003
  (KRAT/)
   μ
   μ.
   35;
  GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
  ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
  Similarity
   KLASS M R.
KRATOCHVIL J
   COLPITTS
   BILLINGEL P A.
   FRIEDMAN P N.
   COHEN
   ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
  35
  ALFPEVESPTPDENSDONSRSSSOASGITGSYSVS
  A,
  Conservative
   Ļ
   Cohen M,
Hayden MA,
L, Russell
  (first entry)
   98US-00050516
   97US-00828855.
   protein;
  100.0%; Score 175; DB 4; 100.0%; Pred. No. 5.1e-17
   8
  Colpitts TL,
Hodges SC,
JC, Stroupe
  CS198 protein
  35
   0
  ₿
  Mismatches
  Klass
SD;
  Friedman
Klass MR,
  cancer;
   35
  35
  0
   PN, Gordon
Kratochvil
   Length
  Indels
  ű
  .
.
   Gaps
   CS 198
  0
```

comprises detecting

Detecting the presence of a target CS198 polynucleotide in a test comprises contacting the sample with a CS198 specific polynucleoti

cest sample leotide and

test

the presence of the target CS198 polynucleotide

sample.

diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition of an individual to, diseases and conditions of the gastrointestinal tract, e.g., cancer and in gene therapy. This is the amino acid sequence of a synthetic peptide based on the predicted human CS198 protein sequence derived from the CS198 consensus sequence shown in seq id 27.

CS198 polynucleotide in a test sample. The method comprises contacting the test sample with at least one CS198 specific polynucleotide or its complement, and detecting the presence of the target CS198 polynucleotide in the test sample, where the CS198-specific polynucleotide has at least 50% identity to a polynucleotide having any of the 27 fully defined sequences of 34-2894 by (S1-27) given in the specification, or their fragments or complements. The composition and methods are useful in

The invention Claim 17;

describes

a method of detecting the presence of a target a test sample. The method comprises contacting

Page 51;

67pp;

English

밁 8

Ļ

ALFPEVFSPTFDENSDQNSRSSSQASGITGSYSVS ALPPEVFSPTPDENSDONSRSSSOASGITGSYSVS

35 0

Matches Query Match

35,

Conservative

0

Mismatches

Local

Similarity

100.0%;

Score 175; DB 6; Pred. No. 5.1e-17;

Length Indels

0,

Gaps

0

0

Sequence 35

Ş

```
RESULT 4
ADN171
ID ADN171
XX
XX
ADN17
DT 17-J
XX
CS19
XX
Gast

  Gastrointestinal tract; GI tract; CS198; cancer; gene therapy
   ADN17175
  ADN17175 standard; peptide; 35 AA
   31-MAR-1997;
30-MAR-1998;
  04-MAR-2004
  US2004043406-A1
  Unidentified
   CS198 peptide
   17-JUN-2004
   22-AUG-2003; 2003US-00646873
Diagnosing diseases such as cancer of the detecting aberrant expression or activity
   WPI; 2004-313754/29
   Roberts-Rapp
   Billingel PA,
   (ROBE/)
   (GRAN/)
   (COLE/)
   (KLAS/)
   KRAT/
  HODG/
   FRIE/)
  GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
   COLPITTS T L.
FRIEDMAN P N.
   ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
  BILLINGEL P A.
   KLASS M R.
KRATOCHVIL J
   EZ,
  ŗ
   (first
  Cohen M,
Hayden MA,
   97US-00828855
  98US-00050516
  Russell
   entry)
  'n,
   Colpitte TL
Hodges SC,
   Stroupe
   TL,
   SD;
   Klass
   Friedman
Klass MR,
  gastrointestinal tract, b of the CS198 polypeptide,
  PN, Gordon
Kratochvil
   g.
                                ঠ
```

and

```
밁
   8
   Query Match
Best Local S
Matches 35
  prevention and/or treatment of diseases or conditions associated with aberrant expression or activity of the CS198 polypeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 peptide used to illustrate the method of the
   The invention relates to reagents and methods for detecting d the gastrointestinal (GI) tract. The method involves detecting presence of target CS198 polynucleotide in the test sample. T and compositions of the present invention are useful for the
               AAH32943 to AAH37195 and AAG73514 to AAG77788 represent human colon cancer-associated nucleic acid molecules (N) and proteins (P), where the proteins are collectively known as colon cancer antigens. The colon cancer antigens have cytostatic activity and can be used in gene therapy and vaccine production. N and P may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate P expression. For example, N and P may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the patients own production of P. Additionally, N may be used to produce the colon cancer-associated Ps, by inserting the nucleic acids to produce the colon cancer-associated Ps, by inserting the nucleic acids to produce the colon cancer-associated Ps, by inserting the nucleic acids to produce the colon cancer-associated Ps, by inserting the nucleic acids to produce the colon cancer-associated Ps, by inserting the nucleic acids to produce the colon cancer-associated Ps, by inserting the nucleic acids to produce the colon cancer-associated Ps, by inserting the nucleic acids to produce the colon cancer-associated Ps, by inserting the nucleic acids to produce the colon cancer-associated Ps, by inserting the nucleic acids to produce the colon cancer-associated Ps, by inserting the nucleic acids to produce the colon cancer-associated Ps, by inserting the nucleic acids to produce the colon cancer-associated Ps, by inserting the nucleic acids the colon cancer-associated Ps, by inserting the nucleic acids the colon cancer-associated Ps, by inserting the nucleic acids the colon cancer-associated Ps, by inserting the nucleic acids to produce the colon cancer-associated Ps, by inserting the nucleic acids to produce the colon cancer-associated Ps, by inserting the nucleic acids to produce the colon cancer-associated Ps, by inserting the nucleic acids to produce the colon cancer-associated Ps, by inserting the nucleic acids to produce the colon cance
  Sequence 35
  Claim 17;
  Human colon cancer antigen
   03-SEP-2001
   AAG73987;
  AAG73987 standard;
  associated treatment methods
  Nucleic acids encoding useful for preventing,
  29-SEP-1999;
03-NOV-1999;
  05-APR-2001
  WO200122920-A2
  Human; colon cancer;
   WPI; 2001-235357/24.
  Ruben
  28-SEP-2000; 2000WO-US026524
   Homo sapiens.
   colorectal carcinoma
   Claim 11; Page 6550-6551; 9803pp;
   (HUMA-) HUMAN GENOME
  , MS
  ω
5.
  host cell
   Similarity
  ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
   ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS
   SEQ
  Barash SC,
   Ą
  Conservative
   (first entry)
   ID NO 45; 67pp; English.
   99US-0157137P.
99US-0163280P.
  protein;
   SCI INC
  colon
   100.0%;
culturing
   4277 human
diagnosing
   Birse CE,
  cancer antigen; diagnosis; detection;
   protein SEQ
   172
  0,
  Score 175; DB 8;
Pred. No. 5.1e-17;
   ₽
  Mismatches
  The method involves detecting the
   colon cancer-associated polypeptides, and/or treating colorectal cancers.
  English.
   Rosen
   ID NO:4751
  35
   Length 35;
     , N may be used
he nucleic acids
oteins. N and P
  The methods
  diseases
   0
   Gaps
  e
f
```

ននិន្តនិន្តនិង

밁 ঠ

```
Query Match
Best Local (
  Matches
   Query Match
Best Local
     Matches
  can be used in the prevention, diagnosis and treatment of colorectal carcinomas and cancers. AAH37196 to AAH377204 and AAB77789 represent sequences used in the exemplification of the present invention. N.B. Pages 666 to 682 and page 7053 of the sequence listing were missing at time of publication, meaning no sequences are present for SEQ ID NO:1027 to 1052, 7921 and 7922
   This sequence represents the C-terminal of the human CS198 protein which is used in a method to detect the presence of a target CS198 polynucleotide in a test sample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be used in detecting, diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oesophagus, gastric ulcer, gastritis, leiomyoma, polyps, Crohn's disease, ulcerative
   Homo
  Gastrointestinal tract; GI tract; cancer; disease; detection; (human; predisposition; treatment; Barret's oesophagus; gastric gastritis; leiomyoma; polyps; Crohn's disease; ulcerative colli
   New gastrointestinal polynucleotides, CS198, and their detection for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastritical contents of the content of the cont
  WPI;
  Claim
  Roberts-Rapp L,
  Billing-Medel PA,
Granados EN, Hay
  31-MAR-1997;
   30-MAR-1998;
  08-OCT-1998
   WO9844159-A1
   pancreatitis.
   Human CS198
  AAW79681;
   AAW79681 standard;
  Sequence 172
  (ABBO ) ABBOTT LAB.
  1998-542714/46
   sapiens.
  26;
  61
   μ
   35;
     l Similarity
  Similarity
  ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
   215
   ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS
  Page 103; 127pp; English.
100.0%;
ilarity 100.0%;
Conservative 0
   protein
   100.0%;
larity 100.0%;
Conservative 0
  AA;
   pancreatitis
  (first
  PA, Cohen M, Colpitts TL,
Hayden M, Hodges SC, Klass
L, Russell JC, Stroupe SD;
   97US-00828855
   98WO-US006251.
  protein;
   C-terminal.
  entry
   215
     0
   0,
Score 175; DB 2;
Pred. No. 4.6e-16;
   Score 175; DB 4;
Pred. No. 3.5e-16;
; Mismatches 0;
   B
  Friedman
MR, Krat
   95
   35
   Iman PN, Gordon
Kratochvil JD;
  Length 172;
  Length 215;
  Indels
     Indels
   S198 protein which
  colitis;
  gastritis
   0
     0
  CS198;
  ulcer;
     Gaps
   Ç
   Gaps
     0
   0
```

```
밁
   8
          The invention relates to a method of detecting the presence of a target CC CS 198 polynucleotide comprising contacting the test sample with at least one CS 198 specific polynucleotide. The method is useful for detecting CC diseases of the gastrointestinal (GI) tract organs, particularly cancer. CC The CS 198 polynucleotides, polypeptides and antibodies are useful for CC treating or determining predisposition to diseases and conditions of the CC I tract such as cancer, gastric ulcer, gastricis, Crohn's disease, CC ulcerative colitis, pancreatitis and Barret's oesophagus. The CS 198 cC ulcerative colitis, pancreatitis and Barret's oesophagus. The CS 198 cC ulcerative colitis, pancreatitis and Barret's oesophagus. The CS 198 cC unmunoassays, as components or as target sites for various therapies. CC Antibodies directed against at least one epitope contained within these CC polypeptides are useful as delivery agents for therapeutic agents, in diagnostic tests and for screening for conditions or diseases associated with CS 198, particularly cancer. Monoclonal antibodies may also be used CC polymerication of chimeric antibodies for therapeutic use. The CS 198 colymucleotide is also useful in gene therapy as greening. The
   Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, co-
contacting test sample with at least one CS 198-specific polynucle
  Billingel
   gastritis; Crohn's disease; ulcerative colitis; pancreatitis;
  Human CS
   06-NOV-2001
  AAE07324
   Claim 17; Page 52-53;
   WPI; 2001-496163/54.
   Granados
  (HODG/)
   (FRIE/)
   (COLP/)
   30-MAR-1998;
   02-AUG-2001
  US2001010904-A1
   Homo sapiens
  Barret's oesophagus; gene therapy; drug screening; human.
  CS 198; gastrointestinal tract
  Roberts-Rapp L,
  (RUSS/)
   31-MAR-1997;
  (KRAT/)
  /DYAH
   (GRAN/)
  104
   _
   ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
  HAYDEN M.
HODGES S C.
   COLPITTS T L.
FRIEDMAN P N.
GORDON J.
GRANADOS E N.
  KLASS M R.
KRATOCHVIL J
  BILLINGEL P A.
   EN,
   COHEN
   198 protein C-terminal portion
   ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
  PA,
   standard; protein;
  ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
   Cohen
Hayden
   (first entry)
  97US-00828855
   98US-00050516.
  Cohen M,
lyden M,
Russell
   - 0
   68pp;
 provides an alternative,
   Colpitts TL, Friedman Hodges SC, Klass MR, JC, Stroupe SD;
  215
   English.
  disease; GI tract; cancer;
   Friedman
  138
   35
  PN, Gordon
Kratochvil
  Gordon
   polynucleotide.
  gastric
 diagnostic
  comprises
   ulcer;
```

invention

non-surgical

```
RESULT 8
ADA26384
AID ADA2
AC 
   ឧទ្ធន
  Ś
  밁
   Query Match
Best Local S
Matches 35
  CS198; cancer diagnosis; cancer staging; cancer mo cancer prognosticating; cancer prevention; cancer; gastrointestinal tract disorder; gene therapy.
   Billingel
Granados E
  Synthetic
   Sequence
  method capable of detecting early stage GI tract disease such as cancer. The present sequence is C-terminal portion of human CS 198 polypeptide
   US2003082619-A1.
  20-NOV-2003
   ADA26384 standard; protein; 215
   Detecting the presence of a target CS198 polynucleotide in a test sample comprises contacting the sample with a CS198 specific polynucleotide and detecting the presence of the target CS198 polynucleotide in the test
  31-MAR-1997;
30-MAR-1998;
   01-MAY-2003
  ADA26384
The invention describes a method of detecting the presence of a target CS198 polynuclectide in a test sample. The method comprises contacting the test sample with at least one CS198 specific polynuclectide or its complement, and detecting the presence of the target CS198 polynuclectide in the test sample, where the CS198-specific polynuclectide has at least to the test sample, where the CS198-specific polynuclectide has at least to identity to a polynucloctide having any of the 27 fully defined sequences of 34-2894 bp (S1-27) given in the specification, or their
   (ROBE/)
   (GORD/)
(GRAN/)
(HAYD/)
(HODG/)
(KLAS/)
  (BILL/)
(COHE/)
(COLP/)
(FRIE/)
   23-OCT-2002;
  Roberts-Rapp
   KRAT/
  104
   GORDON J.
) GRANADOS E N.
) HAYDEN M A.
"TOTGES S C.
   1 Similarity
35; Conser
   COLPITTS T L.
FRIEDMAN P N.
  ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
  EN,
   KLASS M R.
KRATOCHVIL J
   ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
  ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
  peptide
   100.0%;
ilarity 100.0%;
Conservative
   2002US-00278547
   ξ
  ŗ
  (first
  Cohen M,
Hayden MA,
L, Russell
   97US-00828855
98US-00050516
   ש
  based
  67pp;
  entry)
  9
  Colpitts TL,
Hodges SC,
L JC, Stroupe
   English.
  CS198
   0
  Score
Pred.
  ₽
   Mismatches
  protein
  175; DB 4;
No. 4.6e-16;
   Klass
SD;
  Friedman
Klass MR,
   138
  35
  0
  PN, Gordon
Kratochvil
   Length
  Indels
   Gordon
  215;
  â;
  0
  Gaps
  0
```

```
និនិនិនិនិនិនិ
밁
   S
  Query Match
Best Local S
Matches 35
   diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition of an individual to, diseases and conditions of the gastrointestinal tract, e.g. cancer and in gene therapy. This is the amino acid sequence of a synthetic peptide based on the predicted human CS198 protein sequence derived from the CS198 consensus sequence shown in seq id 27.
   Sequence
   fragments or complements.
  (COTA/)
(COTE/)
   31-MAR-1997;
30-MAR-1998;
  Unidentified
   CS198
   17-JUN-2004
  ADN17177 standard;
   Granados EN,
  Billingel PA,
   22-AUG-2003;
   04-MAR-2004
  US2004043406-A1
   Gastrointestinal
   ADN17177;
  Roberts-Rapp
   (FRIE/)
   (KLAS/
   (HODG)
   (STRO/)
  ŒAT,
   (HAYD,
   (GRAN)
  104
   protein
   35;
   GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
KLASS M R.
  KRATOCHVIL J
ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
   Similarity
  COLPITTS
FRIEDMAN
  BILLINGEL P
COHEN M:
   ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
   215
   ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
   100.0%;
nilarity 100.0%;
Conservative 0
   (first
   2003US-00646873.
  ŗ
   Cohen
Hayden
  97US-00828855.
98US-00050516.
   7 H
Z.F.
   tract;
   Russell
  protein; 215
   P
  entry)
   ₹.₹
   ទួ
   Colpitts TL,
Hodges SC,
   'n,
  tract;
   0
   Score 175; DB 6;
Pred. No. 4.6e-16;
; Mismatches 0;
  composition and methods are useful in
   Stroupe
  ₿
  CS198;
  Klass MR,
SD;
   Friedman
  cancer;
  138
  35
  PN, Gordon
Kratochvil
  gene
   Length
   Indels
   215;
  g;
   0
   Gaps
   0;
```

The invention relates to reagents and methods for detecting distant the gastrointestinal (GI) tract. The method involves detecting presence of target CS198 polynucleotide in the test sample. The and compositions of the present invention are useful for the di

are useful for the diagnosis, conditions associated with

The methods diseases the

ę,

prevention

Diagnosing diseases such as detecting aberrant expression associated treatment methods

expression nt methods.

cancer of the on or activity

gastrointestinal tract, of the CS198 polypeptid

polypeptide,

δ and

Claim

17;

SEQ

ä

NO 47; 67pp;

English

WPI;

2004-313754/29

```
밁
   S
   ន្តន្តន្តន្ត្
   Query Match
Best Local S
Matches 35
The invention relates to polymucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polymucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoiesis regulating activity, tissue growth factor activity, immunomobulatory activity and activity tissue growth factor activity, immunomobulatory activity and activity individual activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system diagnosis, arthritis and inflammation. Note: Records for SEQ ID NO 2110 (AAK52581), 2111
  aberrant expression or activity of the CS198 polypeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 protein used to illustrate the method of the
  Human; cytokine; cell proliferation; cell differentiation; gene therapy; vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorder; arthritis; inflammation.
   Nucleic acids encoding in diagnosis and gene t
   Xue AJ,
  01-SEP-2000;
15-SEP-2000;
   03-FEB-2000;
27-APR-2000;
   05-FEB-2001; 2001WO-US004098
   09-AUG-2001.
  WO200157190-A2
  Homo sapiens.
  Human protein
   06-NOV-2001
  AAM79574;
  AAM79574 standard; protein;
   (HYSE-) HYSEQ INC.
  20-JUN-2000;
  g YT, Liu C,
Y, Zhao QA, W
Yang Y,
  2001-476283/51.
  104
  Н
   35,
  AAK52707
   Similarity
   215
  ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
   ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
   ; 2000US-00496914.
; 2000US-00560875.
; 2000US-00598075.
; 2000US-00620325.
; 2000US-00620325.
; 2000US-0063561.
; 2000US-0069325.
; 2000US-0069325.
  100.0%;
ilarity 100.0%;
Conservative (
   Ã,
   (first
  SEQ ID NO 3220.
  288; 6221pp;
  Wang D, Wang O, Wejhrman T,
   entry)
   polypeptides with therapy.
  672
   0
  English
   Score 175; I
Pred. No. 4.6
0; Mismatches
  Asundi V, Zhou
J, Zhang J, Re
Goodrich R;
  ₽
   DB 8;
4.6e-16;
eg 0;
   cytokine-like
   Ren F,
  138
  35
  ָּט
  Length 215;
  Indels
  Š
   u C,
Chen
   activities,
  R, Cao
   0
  Y;
Wang
   Gaps
   ; WZ
  ő
   0;
```

밁 á

568

ALFPEVESPTPDENSDONSRSSSOASGITGSYSVS ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS

0,

35

Indels

0

Gaps

0

```
RESULT 11
AAW79676
ID AAW79676
ID AAW79676
AC AAW79
AC AAW7
AC AAW79
AC AAW79
AC AAW7
A
   ព្រះ្តន
  밁
  á
  Query Match
Best Local S
Matches 35
  Matches
   Query Match
Best Local (
  This sequence represents the human CS198 protein which is used in a method to detect the presence of a target CS198 polymucleotide in a termethod to detect the presence of a target CS198 polymucleotide in a termethod to detect the presence of a target CS198 polymucleotide in a termethod to dispose the continuous and products can be used in detecting, tract disposing, staging, monitoring, prognosticating, preventing or treating or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oesophagus, gastric ulcer, gastritis, leiomyoma, polyps, Crohn's disease, ulcerative colitis, and
   New gastrointestinal polynucleotides, CS198, and their detection - used for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastritis.
  Billing-Medel PA, Cohen M,
Granados EN, Hayden M, Ho
Roberts-Rapp L, Russell JC
  Gastrointestinal tract; GI tract; cancer; disease; detection; (human; predisposition; treatment; Barret's oesophagus; gastric gastritis; leiomyoma; polyps; Crohn's disease; ulcerative colit
   (AAK52582) and 3666 (AAM80020) are omitted as the relevant pages sequence listing were missing at the time of publication
   Human CS198 protein.
   11-JAN-1999
  AAW79676
   Sequence 679
   31-MAR-1997;
  30-MAR-1998;
  08-OCT-1998
  Homo sapiens
   Claim 26; Page 100-102; 127pp; English.
  WPI; 1998-542714/46
  pancreatitis.
  561
   35;
  Similarity 35; Conserv
  Similarity
  standard;
   672 AA;
  Conservative
  100.0%;
llarity 100.0%;
Conservative 0
   Ą
   (first entry)
  97US-00828855
  98WO-US006251
   protein;
   100
   n M, Colpitts TL,
Hodges SC, Klass
JC, Stroupe SD;
  0.0%;
  679
  0;
  Score
Pred.
Score 175; DB 2;
Pred. No. 1.8e-15;
Mismatches 0;
  ₹
   Mismatches
   175; DB 4;
No. 1.8e-15;
   Friedman PN, Go
MR, Kratochvil
   35
  595
  Length 679;
  Length 672;
   Indels
  Gordon
il JD;
  colitis;
   0
   ulcer;
  treating
   from
   test
   0
```

```
The invention relates to a method of detecting the presence of a target CC S198 polynucleotide comprising contacting the test sample with at least Cne CS 198-specific polynucleotide. The method is useful for detecting Cd diseases of the gastrointestinal (GI) tract organs, particularly cancer. The CS 198 polynucleotides, polypoptides and antibodies are useful for CC treating or detecting, staging, monitoring, prognosticating, preventing CC treating or determining prediposition to diseases and conditions of the CG I tract such as cancer, gastric ulcer, gastritis, Crohn's disease, CC ulcerative colitis, pancreatitis and Barret's oseophagus. The CS 198 CC polypoptides are useful as standards or reagents in diagnostic memunoassays, as components or as target sites for various therapies. CC antibodies directed against at least one epitope contained within these CC polypoptides are useful as delivery agents for therapeutic agents, in diagnostic tests and for screening for conditions or diseases associated CC with CS 198, particularly cancer. Monoclonal antibodies may also be used CC polynucleotide is also useful in gene therapy and drug screening. The CS 198 CC polynucleotide is also useful in gene therapy and drug screening.
   30-MAR-1998;
   Misc-difference
   Homo
  Barret's oesophagus; gene therapy; drug screening;
  CS 198; gastrointestinal tract disease; GI tract; cancer; gastric ulcer; gastritis; Crohn's disease; ulcerative colitis; pancreatitis;
  Human CS 198 protein
  06-NOV-2001
  AAE07319
   Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, comprise contacting test sample with at least one CS 198-specific polynucleotide.
  02-AUG-2001
   US2001010904-A1
  31-MAR-1997;
  Claim
  Granados EN,
  Billingel PA,
   (KILAS/)
  (HAYD/)
  (FRIE/)
   (ROBE/)
   BILL/)
  COHE/)
   2001-496163/54.
DB; AAD13637.
   sapiens
   KRATOCHVIL J
ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
  HAYDEN M.
HODGES S C.
  GORDON J.
GRANADOS E N.
   COLPITTS T L. FRIEDMAN P N.
   BILLINGEL P A.
  COHEN
  KLASS M R.
  standard;
   Page 49-51;
  Cohen I
   ŗ
  (first
  97US-00828855
   98US-00050516
   Location/Qualifiers 353
   /note= "Encoded by CGGN"
  protein;
  entry)
   Z,Z
   68pp;
   Colpitts TL, Friedman Hodges SC, Klass MR, JC, Stroupe SD;
  679
  English.
  ₿
   Friedman
```

PN, Gordon J; Kratochvil JD;

comprises

```
RESULT 13
AAM78590
ID AAM78
XX AAM78
XX AAM78
XX DT 06-NC
XX Humar
XX Humar
XX Humar
XX Homo
XX Tong
PR 19-UI
PR 10-SI
PR 
   밁
  Ś
  ននិន្តនិង
   Matches
   Query Match
  method of the invention provides an alternative, method capable of detecting early stage GI tract The present sequence is human CS 198 polypeptide
              The invention relates to polynucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoiesis regulating activity, tissue growth factor activity, hammanomodulatory activity and activity inhibin activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system disporabers, arthritis and inflammation. Note: Records for SEQ ID NO 2110 (AAK52581), 2111
   Human; cytokine; cell proliferation; cell differentiation; vaccine; peptide therapy; stem cell growth factor; haematop tissue growth factor; immunomodulatory; cancer; leukaemia;
  Sequence
   Tang
Ma Y,
  Homo sapiens
  nervous system disorder; arthritis; inflammation.
   Human protein
  06-NOV-2001
   AAM78590
  Nucleic acids encoding polypeptides with cytokine-like activities, useful in diagnosis and gene therapy.
   27-APR-2000;
20-JUN-2000;
  03-FEB-2000;
   05-FEB-2001; 2001WO-US004098
   09-AUG-2001.
   Claim
   Xue AJ,
   20-OCT-2000;
  19-JUL-2000;
  (HYSE-) HYSEQ INC.
   15-SEP-2000;
  y YT,
Zhao (
var
   568
  2001-476283/51.
   20; Page 3512-3514; 6221pp;
  1 ALFPEVFSFTPDENSDONSRSSSOASGITGSYSVS
   Similarity
   679
  o QA,
   standard;
   ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
   Yang Y,
   ; 2000US-00496914.

; 2000US-00560875.

; 2000US-00598075.

; 2000US-00620325.

; 2000US-00629325.

; 2000US-00633561.

; 2000US-00693325.

; 2000US-00728422.
  Conservative
  ₹
  (first entry)
   Ç
  SEQ ID
  Wang D, W
Wejhrman
  Drmanac RT,
Wang D, Wang
   protein;
   100.0%;
  NO 1252.
   H
  679
  Score 175; DB 4;
Pred. No. 1.8e-15
   Asundi V,
J, Zhang
Goodrich R
   Mismatches
   English
  R,
  Zhou P,
   602
   35
  Ren
  0
   non-surgical diagnostic disease such as cancer.
  '13
  Length
  Indels
  ž
  haematopoiesis;
  'n
   679;
  'n,
  Cao
       pages from the
  0
  Wang
  Gaps
  WZ,
   0
```

```
RESULT 14
ADA26379
ID ADA26
XX CS19
KW Canc
KW Ganc
KW Ganc
KW Ganc
XX GS1
PN US2
XX GS1
PN US2
PR A ((C)
  밁
  S
  SXS
   Query Match
Best Local S
Matches 35
  Billingel PA,
Granados EN,
Roberts-Rapp L
The invention describes a method of detecting the presence of a target CS198 polynuclectide in a test sample. The method comprises contacting the test sample with at least one CS198 specific polynuclectide or its complement, and detecting the presence of the target CS198 polynuclectide in the test sample, where the CS198-specific polynuclectide has at least 198 identity to a polynuclectide having any of the 27 fully defined sequences of 34-2894 bp (S1-27) given in the specification, or their fragments or complements. The composition and methods are useful in
  Claim 17; Page 49-50; 67pp; English.
   detecting
  Detecting
   WPI; 2003-596961/56.
  (COTE/)
  31-MAR-1997;
30-MAR-1998;
  23-OCT-2002;
  01-MAY-2003
   US2003082619-A1
   gastrointestinal tract
   cancer prognosticating; cancer prevention;
   CS198; cancer diagnosis; cancer staging; cancer monitoring;
   Predicted
   20-NOV-2003
  ADA26379;
   ADA26379
  Sequence
  sequence listing were missing at the time of publication
   (KILAS/)
  (HAYD,
   (GORD,
   (RUSS/)
  GRAN/)
  568
  BILLINGEL P A.
COHEN M.
COLPITS T L.
PRIEDMAN P N.
GORDON J N.
GORDON S N.
HAYDEN M A.
HODGES S C.
   ა
5
   \vdash
   ROBERTS-RAPP L.
RUSSELL J C.
STROUPE S D.
  Similarity
   KLASS M R.
KRATOCHVIL J
   ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
  679
   standard;
  ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
  the presence of a target CS198 polynucleotide in a test sample contacting the sample with a CS198 specific polynucleotide and the presence of the target CS198 polynucleotide in the test
  amino acid sequence
  100.0%;
Conservative Conservati
   , Cohen M,
Hayden MA,
L, Russell
   ŗ
  8
  2002US-00278547.
   (first
  97US-00828855.
98US-00050516.
  protein;
   entry)
  disorder;
   Colpitts TL,
Hodges SC,
JC, Stroupe
   679
   0
  Score 175; DB 4;
Pred. No. 1.8e-15;
Mismatches 0;
  of the CS198 protein
   gene
   Friedman
Klass MR,
SD;
  therapy.
  cancer;
  602
   35
   PN, Gordon
Kratochvil
   Length 679;
  Indels
   å;
   0
   Gaps
   0
```

S

ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS

Matches Query Match Best Local

Similarity

100.0%; larity 100.0%; Conservative 0

Score Pred.

175; DB 7; No. 1.8e-15;

Length

679;

0

Mismatches

0

Indels

0;

Gaps

0

Sequence

679

ΑA;

```
RESULT 15
ADG14341
ID ADG14
XX Human
XX Human
XX Homo
XX IS-M#
XX IS-M
   នននននង
   밁
   S
   Matches
  Query Match
Best Local
   diagnosing, staging, monitoring, prognosticating, preventing or trover determining the predisposition of an individual to, diseases an conditions of the gastrointestinal tract, e.g. cancer and in generable. This is the predicted amino acid sequence of the human CS protein derived from the CS198 consensus sequence shown in seq id
   The present invention relates to human NC1, NC2 and NC3 proteins and coding sequences (ADG14340-ADG14345). The coding sequences are useful for detecting and screening proliferative insulin-producing cells as well as differentiation and proliferation of such cells and their precursors as analogous cells in treatment of e.g. PHHI and diseases due to differentiation/proliferation abnormality, diseases of the nervous system and pancreas. The coding sequences are also useful as spontaneous proliferation models of pancreas beta-cells. The novel genes NC1, NC2 and NC3 were isolated from the pancreas of PHHI patients, which were used in testing for the detection of proliferative insulin-producing cells or pancreas beta-cells by Northern analysis.
   Sequence 679 AA;
  Homo sapiens
  neuroprotective
   ADG14341 standard; protein; 679
  Claim 1;
  15-MAR-2002; 2002JP-00071592
   06-MAR-2003; 2003WO-JP002620
  25-SEP-2003
  Human; NC1;
  26-FEB-2004
  ADG14341;
  patient-expressed genes for detecting insulin-producing cells in treatment
  Familial
  N-PSDB; ADG14344.
  Niwa H,
   WO2003078631-A1
   568
   2003-767524/72
  35;
   μ
   Similarity
  KANEKA CORP.
  persistent hyperinsulinemic hypoglycemia of infancy (PHHI) expressed genes for detecting and screening e.g. proliferat producing cells in treatment of PHHI.
  ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
   ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS
   SEQ ID NO 2; 34pp; Japanese
   Yamashita K;
   NC2;
  Conservative
  (first entry)
  NC3; PHHI; pancreas beta-cell; insulin; antidiabetic;
  100.0%;
  0;
  Score 175; DB 6;
Pred. No. 1.8e-15;
  Ä
   Mismatches
   602
   35
   Length
   Indels
  679;
  proliferative
  0
   or treating,
  CS198
id 27
  Gaps
  0
```

망

568 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 602

Search completed: March 3, 2006, 13:35:23 Job time : 19.7075 secs

Coop residence of the second s

```
Result
No.
  Run
  욧
  Minimum DB seq length: 0
Maximum DB seq length: 200000000
   Title:
Perfect score:
  Database
  Post-processing: Minimum Match 0%
Maximum Match 10
   Total number of hits satisfying chosen parameters:
  Searched:
  Scoring table:
   Sequence:
  protein -
  on:
pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                      50.5
   protein search, using sw
  BLOSUM62
Gapop 10.0 , Gapext 0.5
   US-10-646-873-45
175
  March
   Match
   3: 1:
   283416 seqs, 96216763 residues
  100.0
32.6
  PIR_80:*
Listing
   ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
  GenCore version 5.1.7 Copyright (c) 1993 - 2006 Biocceleration Ltd
   pir2:*
pir3:*
pir4:*
  pir1:*
   Length DB
   3, 2006, 13:26:31; Search time 2.21088 Seconds (without alignments) 1523.185 Million cell updat
   139
344
362
578
578
1063
1596
   Match 100%
first 45 s
  AB0088
JQ1125
T08237
D96516
T13926
                      B84765
D86731
A35927
  F88640
T30351
S31941
T29264
A30901
T41715
  873829
A59251
   T00636
  summaries
  853043
   SUMMARIES
   mode1
  283416
              hypothetical prote hypothetical prote hypothetical prote 190K DNA-binding p hypothetical prote
   probable ABC trans
myosin - Acetabula
probable flagellar
  Description
   cell updates/sec
  major merozoite su
   kinesin family pro
hypothetical prote
  WHI3 protein - yea
probable membrane
  hypothetical
  mucin-like protein
penicillin-binding
  probable protein p
protein F52C12.4 [
  gas-vesicle operon
  F16N3.14 [imported
   gas-vesicle operon
   nuclear factor RIP
   probable membrane
  ypothetical
   pothetical prote
   protein
```

| 45                 | 44                | 43                 | 42                 | 41                 | 40                 | 39                 | 38                 | 37                 | 36     | 35     | ω<br>4 | 33     | 32     | 31                 | 30<br>0            |
|--------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------|--------|--------|--------|--------|--------------------|--------------------|
| 49                 | 49                | 49.5               | 49.5               | 49.5               | 49.5               | 49.5               | 49.5               | 50                 | 50     | 50     | 50     | 50     | 50     | 50                 | 50                 |
| 28.0               | 28.0              | 28.3               | 28.3               | 28.3               | 28.3               | 28.3               | 28.3               | 28.6               | 28.6   | 28.6   | 28.6   | 28.6   | 28.6   | 28.6               | 28.6               |
| 288                | 266               | 896                | 716                | 544                | 489                | 480                | 359                | 1211               | 972    | 633    | 616    | 581    | 550    | 517                | 491                |
| N                  | N                 | N                  | N                  | N                  | N                  | N                  | N                  | N                  | N      | N      | N      | N      | N      | N                  | -                  |
| B40722             | A82851            | S48761             | H84421             | E97166             | B82275             | T34294             | S24240             | T42230             | T16094 | F84483 | E84463 | B84715 | T03714 | H86452             | ZNBPMU             |
| homeotic protein i | chaperone procein | trehalose-phosphat | probable receptor- | flagellar basal bo | toxin co-regulated | nypothetical prote | lymphocyce surface | Ar4 procein - mous | ď      |        |        |        |        | MUDRA-like cranspo | gene N protein - p |

## ALIGNMENTS

Claccession: T00636
Claccession: T00636
Claccession: T00636
R;Lamerdin, J.B.; McCready, P.M.; Skowronski, E.; Adamson, A.W.; Burkhart-Schultz, K.; Crescu, A.; Avila, J.; Liu, S.; Bruce, R.; Quan, G.; Montgomery, M.; Ow, D.; Nolan, M.; resubmitted to the EMBL Data Library, January 1998
A;Description: Sequence analysis of a 3.5 Mb contig in 19p13.3 between CDC34 and D198342

hypothetical protein F21856\_2 - human C;Species: Homo sapiens (man) C;Date: 01-Feb-1999 #sequence\_revision 01-Feb-1999 #text\_change 09-Jul-2004

T00636 RESULT 1

A; Reference number: Z14195 A; Accession: T00636

A;Status: preliminary; translated from GB/EMBL/DDBJ A;Molecule type: DNA A;Residues: 1-679 <LLAM>

```
R;anonymous, The Buropean Union Arabidopsis Genome Sequencing Consortium, The Cold Nature 402, 769-777, 1999
A;Title: Sequence and analysis of chromosome 4 of the plant Arabidopsis thaliana.
A;Reference number: A85001; MUID:20083488; PMID:10617198
A;Accession: B85035
   RESULT 2
B85035
  hypothetical protein AT4g02760 [imported] - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 09-Jul-2004
  밁
   S
   A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-419 <STO>
  A; Map position: 4
  A;Gene: AT4g02760
   C; Accession:
  A; Note: F21856_2
   A;Map position: 19p13.3
A;Introns: 594/1; 637/3; 650/3
  A; Cross-references: UNIPROT: Q8IVT2;
   Query Match 100.0%; Best Local Similarity 100.0%; Matches 35; Conservative 0;
   Cross-references: UNIPROT:Q9SY03; UNIPARC:UPI00000A6D56; GB:NC_001268; NID:g7269761; F
Matches
                   Query Match
Best Local Similarity
  568
12;
   1 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 35
   B85035
  ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
  Conservative
                       32.6%;
Score 57; DB 2; Length 419; Pred. No. 7.5; 6; Mismatches 11; Indels
   Score 175; DB 2;
Pred. No. 2.2e-15;
Nismatches 0;
   UNIPARC: UPI00000745CD; EMBL: AC004030; NID: 92804590;
   602
  Length 679;
   Indels
      0
   0,
   Gaps
      Gaps
  0;
        0
```

```
wHI3 protein - yeast (Saccharomyces cerevisiae)
N;Alternate names: protein N1382; protein YNI.10
C;Species: Saccharomico
   RESULT 3
S37762
   A;Cross-references: UNIPARC:UPI0000138F03; R;Coster, F.; Jonniaux, J.L.; Goffeau, A.; submitted to the Protein Sequence Database,
  A;Molecule type: DNA
A;Residues: 1-661 <JOW>
A;Residues: 1-661 <JOW>
A;Cross-references: UNIPARC:UPI0000138F03; EMBL:X78898; NID:g600045; PID:g600068
A;Cross-references: UNIPARC:UPI0000138F03; EMBL:X78898; NID:g600045; PID:g600068
R;Nash, R.S.; Futcher, A.B.
submitted to the EMBL Data Library, August 1993
A;Description: Characterization of WHI3, a new size control gene of Saccharomyce
   A,Cross-references: UNIPROT:P34761; UNIPARC:UPI0000138F03; EMBL:X78898; A,NOte: the nucleotide sequence was submitted to the EMBL Data Library, R,Jonniaux, J.L.; Coster, F.; Purnelle, B.; Goffeau, A. submitted to the EMBL Data Library, April 1994 A,Description: A 21.7 kb DNA segment on the left arm of yeast chromosome A,Reference number: S49850 A;Accession: S49872
  C;Date: 27-Jan-1995 #sequence_revision 16-Feb-1996 #text_change 05-Oct-2004 (C;Accession: S50734; S49872; S56045; S63154 R;Jonniaux, J.L.; Coster, F.; Purnelle, B.; Goffeau, A. Yeast 10, 1639-1645, 1994 A;Title: A 21.7 kb DNA segment on the left arm of yeast chromosome XIV carr
  밁
  ð
  A;Molecule type: mRNA
A;Residues: 1-574 <JAS>
A;Cross-references: UNIPROT:Q00708; UNIPARC:UPI00000836E2; EMBL:M80466; NID:g155856; PI
  Mol. Biochem. Parasitol. 52, 263-270, 1992
A;Title: A Babesia bovis 225-kilodalton protein located on the cytoplasmic side of A;Reference number: S37762; MUID:92319010; PMID:1377786
A;Accession: S37762
  밁
   ð
  A; Molecule type: DNA
A; Residues: 1-661 < COS>
  A; Reference number: S63151
A; Accession: S63154
  A; Molecule type: DNA
A; Residues: 1-661 < NAS>
   A; Molecule type: DNA
A; Residues: 1-661 < JON>
   A; Title: A 21.7 kb DNA segment on the left A; Reference number: S50712; MUID:95242839;
   225K protein
   A; Reference number: S56045
  A;Accession: S50734
  A;Status: preliminary
  A;Cross-references: UNIPARC:UPI0000138F03;
  A; Accession: S56045
  A; Status: nucleic acid sequence not shown; translation not shown
   Jasmer, D.P.; Reduker, D.W.; Perryman, L.E.; McGuire,
pl. Biochem. Parasitol. 52, 263-270, 1992
   Query Match
Best Local
  Date: 19-May-1994 #sequence_revision 01-Dec-1995 #text_change 09-Jul-2004 Accession: S37762
  Species: Babesia bovis
                    Experimental source:
   Matches
   Local Similarity
  379
  193
   12;
  s
  4
  PEIIRDTNDENMDTNDSKPAQVTPTTPSPSIT 224
  PEVFSPTPDENSDQNSRSSSQASGITGSYSVS 35
  EVFSPTPDENSDONSRSSSOASGITGSYS
   Babesia bovis
   32.6%;
llarity 37.5%;
Conservative
                      strain
   (fragment)
                      S288C
  ; Score 57; DB 1; Pred. No. 11; 5; Mismatches
  protein YNL197c
   EMBL:U01095; NID:g393076; PID:g393077
Purnelle, B.; Van Dyck, L.
, April 1996
   arm of yeast chromosome PMID:7725799
  EMBL: Z71473; NID: g1302194; PID: g1302195; MIPS
   ω
  2
   15;
   Length 574;
   Indels
  chromosome
   0
   XIV carries WHI3,
   Saccharomyces
   Gaps
   NID:g600045;
April 1994
  VIX
  carries
   0
  cerev
   the
  ជ្ជ
   PII
  ¥
밁
                                   S
   片
   á
   밁
   á
```

```
probable membrane protein YMR012w - yeast (Saccharomyces N;Alternate names: hypothetical protein YM8270.16 C;Species: Saccharomyces cerevisiae C;Date: 08.Jul-1995 #sequence_revision 01-Sep-1995 #text C;Accession: S53043
  A;Gene: SGD:WHI3
A;Cross-references: SGD:S0005141; MIPS:YNL197c
A;Map position: 14L
C;Superfamily: RNA-binding protein Rnp24p; ribonucleoprotein repeat homology F;539-609/Domain: ribonucleoprotein repeat homology <RRM1>
   RESULT
S53043
   R;Parkhill, J.; Wren, B.W.; Thomson, N.R.; Titball, R.W.; Holden, M.T.G.; Prentice, deno-Tarraga, A.M.; Chillingworth, T.; Cronin, A.; Davies, R.M.; Davis, P.; Dougan, il, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; Whitehead, S.; Barre Nature 413, 523-527, 2001
  probable membrane protein YPO2731 [imported] - Yersinia pestis (strain CO92 C;Species: Yersinia pestis C;Cspecies: Yersinia pestis C;Date: 02-Nov-2001 #sequence_revision 02-Nov-2001 #text_change 09-Jul-2004 C;Accession: AC0333
   AC0333
   A; Residues: 1-1277 <DEV>
A; Cross-references: UNIPROT: Q03690;
A; Experimental source: strain AB972
C; Genetics:
   A;Title: Genome sequence of Yersinia pestis, the causati
A;Reference number: AB0001; MUID:21470413; PMID:11586360
A;Accession: A00333
   A;Cross-references: SGD:S0004614; MIPS:YMR012w
A;Map position: 13R
C;Keywords: transmembrane protein
F;835-851/Domain: transmembrane #status predic
  A; Reference number: $53028
A; Accession: $53043
  A; Gene: SGD:CLU1
  A; Molecule type:
  submitted to the EMBL Data Library,
   R;Devlin,
  A;Gene:
  A;Cross-references: UNIPROT:Q8ZD61; UNIPARC:UPI00000CD961; GB:AL590842; PIDN:CAC92970.1;
   A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-679 <KUR>
  RESULT
   Matches
                                      Matches
  Query Match
  Query Match
Best Local
   Matches
  Query Match
  σ
  Local
   Local Similarity 34.1%;
   Local
  YP02731
  643
  10
  N
                                    Similarity 9; Conserv
  Similarity
  MYPVNQSNTPQKVPPARLSSSRNSHKNNSTTSLSSNITGSASIS 514
  TPDENSDONSRSSSOASGITGSYS 33
  LFPEVFSPTPDE-----
  TPSRSSDSSSSSSSSGSGSSGGGS
FSPTPDENSDONSRSS
   Churcher, C.M.
  DNA
   Conservative
   Conservative
  Conservative
   31.4%;
  31.4%;
 22
   #status predicted
                                      4;
   ω
••
   9
  Score 55;
Pred. No.
  Score 57; DB 2;
Pred. No. 12;
   Score 55;
Pred. No.
  March 1995
  NSDQNSRSSSQASGITGSYSVS
  UNIPARC: UPI0000052EF5;
   Mismatches
  Mismatches
   Mismatches
  999
  the causative
  В
  2
   2;
   10;
   <MMT>
  #text_change 09-Jul-2004
   9
                                      ω
--
   Length 661
  Length 1277;
   Length
   Indels
  Indels
   Indels
   cerevisiae)
  ω
5
  EMBL: Z48613; NID: g728645;
  agent
   10;
  of.
                                      0,
   0
  plague.
   Gaps
  Gaps
   Gaps
  Dougan, G.;
S.; Barrell,
  0
   0
   ۲
  PID
```

FDPSPKENTDENAHSS

Mon

```
C;Raccession: S57348
C;Accession: S57348
R;Cavailles, V.; Dauvois, S.; L'Horset, F.; Lopez, G.; Hoare, S.; Kushner, P.J.; Parker, R;Cavailles, V.; Dauvois, S.; L'Horset, F.; Lopez, G.; Hoare, S.; Kushner, P.J.; Parker, EMBO J. 14, 3741-3751, 1995
A;Title: Nuclear factor RIP140 modulates transcriptional activation by the estrogen rece A;Topearence number: S57348; MUID:95369246; PMID:7641693
  ঠ
   밁
  C;Species: Homo sapiens (man)
C;Date: 28-Oct-1995 #sequence_revision 03-Nov-1995 #text_change 09-Jul-2004
  ঠ
  A,Title: The neuron-specific kinesin superfamily protein A,Reference number: A56921; MUID:95292344; PMID:7539720 A,Accession: A56921
  kinesin family protein KIFla - mouse C; Species: Mus musculus (house mouse)
   A;Reference number: 857348; MUID:95369246; A;Accession: 857348
  nuclear factor RIP140 - human
   밁
  A;Cross-references: UNIPROT:P48552; UNIPARC:UP10000160253; EMBL:X84373; NID:g940538;
  A,Residues:
   A; Molecule type: mRNA
   A;Title: Complete genome sequence of Pseudomonas aeruginosa A;Reference number: A82950; MUID:20437337; PMID:10984043 A;Accession: D83232
  R;Stover, C.K.; Pham, X.Q.; Brwin, A.L.; Mizoguchi, S.D.; Warrener, P.; Hickey, adman, S.; Yuan, Y.; Brody, L.L.; Coulter, S.N.; Folger, K.R.; Kas, A.; Larbig, J. Lory, S.; Olson, M.V.
Nature 406, 959-964, 2000
   A, Status: preliminary; nucleic acid sequence not shown
   A;Statue:
   hypothetical protein PA3313 [imported] - Pseudomonas aeruginosa (strain PAO1)
C;Species: Pseudomonas aeruginosa
  Query Match
Best Local S
Matches 14
   Okada, Y.; Yamazaki, H.; Sekine-Aizawa, Y.; Hirokawa,
ell 81, 769-780, 1995
  ,97-104/Region: nucleotide-binding motif A
  Status: preliminary; translated from GB/EMBL/DDBJ
  Accession: A56921
                                       Molecule type: DNA
   Date: 15-Sep-2000 #sequence_revision 15-Sep-2000 #text_change 09-Jul-2004
  Accession:
  Local
   1414
   preliminary
   403
  14;
  1-1158 <CAV>
  4
  Similarity
  Similarity
   SIFEESSTPTTIDEYSDNNPSFTDDSSGDESSYS
  ALFPEVFSPTP-DENSDONSRSSSQASGITGSYS 33
   PEVLSPASSEDSE -- SRSSSGAS
  PEVFSPTPDENSDQNSRSSSQAS 26
  Conservative
  Conservative
                   <STO:
UNIPROT:Q9HYT1; UNIPARC:UPI00000C59AA; GB:AE004753; GB:AE004091; NID
  31.1%;
  30.9%;
  2; Mismatches
  Score 54;
Pred. No.
  Score 54.5;
Pred. No. 5
   Mismatches
   1434
  (P-loop)
  멂
  DB 2;
  ∾
••
   436
   14;
  <u>ب</u>
  Length 1695;
  Length 1158;
   Indels
   z
   KIF1A is
   GB:D29951; NID:g976234;
   PA01,
  09-Jul-2004
  ν
••
   1;
   an opportunistic path
   a unique monomeric mo
   homology; pleckstr:
   Gaps
   ۲,
  M.J.; Br
K.; Lim,
  PIDN
  PII
```

```
RESULT 10
S27779
  RESULT 11
S73829
  묽
  S
  probable ABC transport permease - Mycoplasma pneumoniae (strain
N;Alternate names: hypothetical protein F10_orf750
  片
   S
  A;Cross-references: UNIPROT:Q17117; UNIPARC:UPI000007AA73; EMBL:M87623; NID:g155927;
   R;Dalrymple, B.P.; Peters, J.M.
submitted to the EMBL Data Library, March 1992
A;Description: Sequence of a Babesia bovis gen
  N;Alternate names: variable antigen 1
C;Species: Babesia bovis
C;Date: 17-Apr-1993 #sequence_revision 17-Apr-1993
  major merozoite
  A;Gene:
  A;Experimental source: strain C;Genetics:
   R;Himmelreich, R.; Hilbert, H.; Plagens, H.; Pirkl, E.; Li, B.C.; Herrmann, R. Nucleic Acids Res. 24, 4420-4449, 1996
A;Title: Complete sequence analysis of the genome of the bacterium Mycoplasma pneumoniae A;Reference number: S73327; MUID:97105885; PMID:8948633
  C;Species: Mycoplasma pneumoniae
A;Variety: ATCC 29342
C;Date: 27-Feb-1997 #sequence_revision 25-Apr-1997 #text_change 09-Jul-2004
  C; Keywords: surface antigen
  A;Residues:
  A; Accession: S27779
   C; Accession:
밁
                              8
   A; Molecule type: mRNA
   A; Reference number: S27779
   A; Genetic
  A;Cross-references: UNIPROT:P75445; UNIPARC:UPI000013A815; EMBL:AE000049; GB:U00089;
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, November 1999
  A; Molecule type: DNA
A; Residues: 1-750 < HIM>
   A;Status: preliminary; nucleic acid sequence not shown; translation not shown
  A; Accession: S73829
   Matches
  Query Match
  Best
   Matches
  Query Match
  Matches
   Query Match
   Accession: S73829
   Local Similarity
  Local
  PA3313
  193
389
   38
  1-370 <DAL>
   Similarity
  Similarity
  PEIIRDTNDENLDTNDSKPAEVTPTTPSPSIT
   PEVFSPTPDENSDONSRSSSOASGITGSYSVS 35
   PRVFSAIEPENSPMLKRSLALAAGIALSLSAA 69
SPFPKEGDDENTKGDDNSSEKTDTVSVS
   PEVFSPTPDENSDONSRSSSOASGITGSYSVS
                                SPTPDENSDONSRSSSOASGITGSYSVS 35
  surface antigen 1 homolog
   Conservative
  30.3%;
   30.3%;
  30.3%;
  PAO1
  ; Score 53; DB; Pred. No. 49; 5; Mismatches
   Score 53;
Pred. No.
   Score 53;
Pred. No.
   Mismatches
   Mismatches
   (5'end)
   gene
   20;
   DB 2;
22;
   DB
  DB 2;
   35
   2:
  encoding
   15;
   15;
  12;
   #text_change 09-Jul-2004
   Length 750
   Length 370;
   Babesia
   Indels
  Indels
  Ø
   335;
  protein with regions of
   bovis (fragment)
   ATCC
   0
  0
  0
  Gaps
   Gaps
   Сарв
   0
  0
```

myosin - Acetabularia cliftonii C;Species: Acetabularia clifton

A59251

NIC

```
C;Species: Yersinia pestIs
C;Species: Yersinia pestIs
C;Species: Yersinia pestIs
C;Date: 02-Nov-2001 #sequence_revision 02-Nov-2001 #text_change 05-Oct-2004
C;Date: 02-Nov-2001 #sequence_revision 02-Nov-2001 #text_change 05-Oct-2004
C;Accession: AB0088
R;Parkhill, J; Wren, B.W.; Thomson, N.R.; Titball, R.W.; Holden, M.T.G.; Prentice, M.B.
deno-Tarraga, A.M.; Chillingworth, T.; Cronin, A.; Davies, R.M.; Davie, P.; Dougan, G.;
deno-Tarraga, A.M.; Chillingworth, T.; Cronin, A.; Stevens, K.; Whitehead, S.; Barrell,
11, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; Whitehead, S.; Barrell,
Nature 413, 523-527, 2001
Nature 413, 523-527, 2001
  Gas-vesicle operon protein gvpH - Halobacterium salinarum plasmids pHH1 and C;Species: Halobacterium salinarum C;Date: 31-Mar-1992 #sequence_revision 31-Mar-1992 #text_change 31-Jan-2000 C;Accession: JQ1125; 815187 R;Jones, J.G.; Young, D.C.; DasSarma, S. Gene 102, 117-122, 1991 A;Reference number: JQ1122; MUID:91323716; PMID:1864501 A;Accession: JQ1122; MUID:91323716; PMID:1864501
A; Note: 1
R; Horne,
   RESULT 13
AB0088
   C;Accession: A59251
R;Vugrek, O.; Menzel,
submitted to GenBank,
   C;Date: 19-May-2000 #sequence_revision 19-May-2000 #text_change 09-Jul-2004 C;Accession: A59251
   A;Molecule type: DNA;Residues: 1-182 <JON>
A;Residues: 1-182 <JON>
A;Cross-references: UNIPARC:UPI000012BE2C; GB:M58557; NID:g150406;
A;Experimental_source: strain NRC-1, plasmid pNRC100
  밁
  δ
   A;Molecule type: DNA
A;Residues: 1-546 <KUR>
A;Cross-references: UNIPROT:Q8ZIO8; UNIPARC:UPI0000DCD2A; GB:AL590842; PIDN:CAC89565.1
  A;Title: Genome sequence of Yersinia pestis, the causative agent of plague A;Reference number: AB0001; MUID:21470413; PMID:11586360 A;Accession: AB0088
   probable flagellar M-ring protein flif [imported] - Yersinia pestis (strain C;Species: Yersinia pestis
   밁
   ঠ
  A;Status: preliminary; not compared with conceptual A;Molecule type: mRNA A;Residues: 1-1145 < VUG>
  A;Description: Molecular analysis of the cDNA coding A;Reference number: A59251 A;Accession: A59251
   RESULT 14
  A;Gene: myo2
A;Genetic co
  A;Genetics:
  A;Status: preliminary
  ;97-799/Domain:
   Genetics:
   Cross-references: UNIPROT:004146; UNIPARC:UPI00000A9550; GB:U94398; NID:g2051982; PID:
  Superfamily:
   Matches
   Query Match
   Matches
   Query Match
the source is designated as Halobacterium halobium, M.; Englert, C.; Wimmer, C.; Pfeifer, F.
   Local
   code: SGC5
   635
   279
  10,
   ហ
   13;
   2 LFPEVFSPTPDENSDQNSRSSSQASGI 28
   Similarity
   Similarity
  LLVSLFEESDDQNSDSNSENSSSNANV 661
  EHYGPDPRINDENIQQENSNDDMAMGIPGSLS 310
   EVFSPTP---DENSDONSRSSSQASGITGSYS 33
  probable flagellar basal-body M ring
  myosin motor domain homology <MMO
  Conservative
   Conservative
   March 1997
   30.0%;
   30.3%;
37.0%;
   Score 52.5; Di
Pred. No. 40;
3; Mismatches
  6
   Score 53; DB
Pred. No. 78;
  Mismatches
   DB 2;
   DB 2;
   13;
  11;
  protein
   Length 1145;
  translation
  for an unconventional myosin
  Length 546;
  Indels
  Indels
   ω
•
  ٥,
   PID:g455302
  on the Halobacterium
   Gaps
  Gaps
  CO92)
   <u>ب</u>
  0
   from
   Search
Job tim
  밁
  밁
   Ś
  Ş
```

time

completed: March me ; 3.21088 secs

Ψ

2006, 13:36:34

```
R.Ng, W.V.; Ciufo, S.A.; Smith, T.M.; Bumgarner, R.E.; Baskin, D.; Faust, J.; Hall, Genome Res. 8, 1131-1141, 1998
A;Title: Snapshot of a large dynamic replicon in a halophilic Archaeon: megaplasmid A;Reference number: 216408; MUID:99063795; PMID:9847077
A;Accession: T08237
  A;Genome: plasmid pHH1 C;Superfamily: Halobacterium
  A;Note: the nucleotide sequence was A;Note: the source is designated as
   Mol. Microbiol. 5, 1159-1174, 1991
A;Title: A DNA region of 9 kbp contains all genes necessary for gas vesicle synthesis A;Reference number: S15183; MUID:92065812; PMID:1956294
A;Accession: S15187
  gas-vesicle operon protein gvpH - Halobacterium sp.
N;Alternate names: hypothetical protein H0237
   A;Gene: gvpH
A;Genome: pl
  A;Cross-references: UNIPARC:UPI000012BE2C;
A;Experimental source: plasmid pHH1
  A;Genome: plasmid pNRC100
C;Superfamily: Halobacterium
   A;Cross-references: UNIPROT:P24372; UNIPARC:UPI000012BE2C; A;Experimental source: strain NRC-1
  A; Molecule type: DNA
A; Residues: 1-182 < NGW >
   A;Genome: plasmid
  A;Gene: gvpH
  A; Molecule type: DNA
  A;Status: nucleic
   A; Gene: gvpH; HALOSP:H0237
   A;Status: translated from GB/EMBL/DDBJ
   A;Variety: strain NRC-1
  A;Residues:
  Date: 11-Jun-1999 #sequence_revision 11-Jun-1999 #text_change;Accession: T08237
  ;Genetics: <NRC>
   ;Genetics:
   Query Match
Best Local S
   Genetics:
   Matches
   Query Match
Best Local (
   Species: Halobacterium sp.
   Matches
   Genetics:
   15
  Local
   Local Similarity es 10; Conserv
  plasmid
                                  11
  11 PDENSDONSRSSSOASGI
  1-182 <HOR>
   Similarity
                  PDENSDONSRSSSOASGI
  PDENDDASDDQSSQLSGL
PDENDDASDDQSSQLSGL
   Conservative
   Conservative
  pNRC100
   acid sequence not shown; translation
   29.7%;
55.6%;
   29.7%;
  Hdvb
  Hqvp
  2;
                                28
  20
  28
20
   2;
   Score 52;
Pred. No.
   Score 52; DB
Pred. No. 14;
  protein
  protein
  submitted to t
Halobacterium
   Mismatches
   Mismatches
  EMBL: X55648; NID: g43516;
  to the EMBL Data Library, rium halobium
   2
   <u>۷</u>
   6
   6
  Length 182;
   Length 182;
  (strain NRC-1) plasmid pNRC100
  not
   Indels
   Indels
   EMBL: AF016485; NID: 92822278;
   09-Jul-2004
   0
   0;
  PID:g43521
   Gaps
   September
   megaplasmid
   0;
   0
  B.;
   õ
   'n
```

3

```
Result
No.
  Minimum DB
Maximum DB
   Run
   중
  Post-processing: Minimum Match 0%
Maximum Match 100
Listing first 45
   Scoring table:
  sequence:
   Database
   Total number of hits satisfying chosen parameters:
   Perfect score:
  protein -
 Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
   57.5
57
57
57
57
57
   59.5
 seq length: 0
seq length: 2000000000
   132
132
64
61
60
   ភេសសស
   protein search, using sw model
   BLOSUM62
Gapop 10.0 ,
  March
  100.0
94.3
   Match
  2166443 seqs, 705528306 residues
  US-10-646-873-45
   UniProt_05.80:*
1: uniprot_sprot:*
2: uniprot_trembl:*
   ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
  GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd
   Length DB

    2006, 13:19:17; Search time 13.3673 Seconds
(without alignments)
    1847.299 Million cell updates/sec

545
855
1201
3071
363
   2418
669
  Gapext 0.5
  100%
Q527CZ_MAGGR
Q417X8 GIBZE
Q9C1C4_AJECA.
Q7YQC1 GRYSA
Q76P28_DICDI
Q6BX24_DEBHA
Q54KT6_DICDI
Q81ZX0_STRAW
Q4SEN1_TETNG
  Q8MP25_DICDI
Q55SM6_DICDI
Q54VV1_DICDI
Q54CF8_DICDI
Q54CF8_DICDI
Q5CNV9_CRYHO
Q5B5F7_EMENI
Q6YY15_QRYSA
   Q54T97_DICDI
Q9VJ42_DROME
Q4T095_TETNG
Q852B9_ORYSA
Q9SY03_ARATH
  Q00708_BABBO
Q71T12_MOMCH
Q71T13_MOMCH
  ä
  WHI3_
  Q4WKQ0_ASPFU
Q5ZJA1_CHICK
  CS021_HUMAN
   Q4QE28_LEIMA
   summaries
   SUMMARIES
  YEAST
   2166443
  P34761
Q527c2
Q417x8
Q9c1c4
  Q9vj42
Q4t095
Q852b9
Q98y03
   Q5cnv9
  26yy15
  Q4qe28
   Q8ivt2
  Description
   Q54cf8
   oryza sativ
baspergillus
lgallus gall
dictyosteli
drosophila
                   ajellomyces
l oryza sativ
dictyosteli
debaryomyce
dictyosteli
   mus musculu
   magnaporthe
gibberella
  momordica c
   arabidopsis
babesia bov
   tetraodon n
oryza sativ
   cryptospori
aspergillus
   dictyosteli
  dictyosteli
   dictyosteli
   dictyosteli
   leishmania
  omod
  вассhаготус
   варіеп
```

|            | 45                 | 44           | 43           | 42           | 41           | 40           | 9            | 38           | 37           | 36           | <u>3</u> 5   | 34           | 33           | 3.<br>2.     |  |
|------------|--------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--|
|            | 55                 | 55           | 55           | 55           | 55           | 55           | 55.5         | 55.5         | 55.5         | 55.5         | 55.5         | 55.5         | 55.5         | 55.5         |  |
|            | 31.4               | 31.4         | 31.4         | 31.4         | 31.4         | 31.4         | 31.7         | 31.7         | 31.7         | 31.7         | 31.7         | 31.7         | 31.7         | 31.7         |  |
|            | 679                | 525          | 524          | 503          | 437          | 406          | 2607         | 1754         | 1393         | 1017         | 506          | 216          | 191          | 132          |  |
|            | Ŋ                  | N            | N            | N            | N            | N            | N            | N            | Ŋ            | N            | N            | N            | N            | N            |  |
| ALIGNMENTS | Q8ZD61_YERPE       | Q84DU2_LISSE | Q84DU1_LISSE | Q84DT8_LISSE | Q5LW22_SILPO | Q9W404_DROME | Q8BTI8_MOUSE | Q80U37_MOUSE | QSCXX8_CRYPV | Q528V0_MAGGR | Q8K383_MOUSE | Q5JTW1_HUMAN | Q5C1F1_SCHJA | Q5JTV9_HUMAN |  |
|            | Q8zd61 yersınıa pe | insteria     | Listeria     | listeria     | SILICIDAC    | -            | _            |              |              |              | -            |              |              | _            |  |

### RESULT 1 CS021\_HUM RX MEDLINE=22388257; Pubmed=12477932; DOI=10.1073/pnas.242603899; RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E., RA Brownstein M.J., Ugdin T.B., Toshiyuki S., Carninci P., Prange C., RA Brownstein M.J., Ugdin T.B., Toshiyuki S., Carninci P., Prange C., RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., RA Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A., RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., RA Schnerch A., Schein J.B., Jones S.J.M., Marra M.A.; RA Scherch A., Schein J.B., Jones S.J.M., Marra M.A.; Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002). 1 HUMAN CS021 HUMAN QBIVTZ; 13-SEP-2005 13-SEP-2005 13-SEP-2005 Eukaryota; Metazoa; Mammalia; Eutheria; Protein C19orf21. Name=C19orf21; EMBL; BC042125; AAH42125.1; -; EMBL; BC052236; AAH52236.1; -; PIR; T00636; T00636. This Swiss-Prot entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the El the European Bioinformatics Institute. There are no resti use as long as its content is in no way modified and the European Bioinformatics Institute. NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA]. NCBI\_TaxID=9606 Homo sapiens (Rel. (Human) and Colon STANDARD; 48, 48, Euarchontoglires; Chordata; Craniata; Vertebrata; Euteleostomi; Buarchontoglires; Primates; Catarrhini; Hominidae; Created) Last sequence update) Last annotation update) PRT; mRNA. update) 679 B thie EMBL outstation a collaboration is not

Coiled coil.
COILED 5
SEQUENCE 67

569 I 75357 MW;

Potential.

D2881CF5087E61F8 CRC64;

HGNC;

Ensembl; ENSG00000099812; Homo sapiens HGNC:27000; C19orf21. 545 679 AA;

```
RESULT

ID 21

I
       CS021 OT CS021 OT CS021 OT CS021 OT CS022 OT CS022 OT CS022 OT CS02 OT
   밁
   ð
  밁
  ð
   Matches
   Query Match
Best Local Similarity
  Matches
  Query Match
Best Local (
  CS021 PONPY
Q5RBH3;
NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].

MEDLINE=22354683; PubMed=1246681; DOI=10.1038/nature01266;

Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo S.,

Nikaido I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa H.

Yagi K., Tomaru Y., Hasegawa Y., Nogani A., Schonbach C., Gojobori

Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J.,

Schriml L.M., Kanapin A., Matsuda H., Batalov S., Beisel K.W.,

Blake J.A., Bradt D., Brusic V., Chothia C., Corbani L.E., Cousins

Balke J.A., Bradt D., Brusic V., Chothia C., Corbani L.E., Cousins

Balla B., Dragani T.A., Fletcher C.F., Forrest A., Frazer K.S.,

Gaasterland T., Gariboldi M., Gissi C., Godzik A., Gough J.,

Grimmond S., Gustincich S., Hirokawa N., Jackson I.J., Jarvis E.D.,
  Protein C19orf21 homolog.

Mus muscullus (Mouse).

Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;

Muroidea; Muridae; Mus.
   13-SEP-2005 (Rel. 48, Created)
13-SEP-2005 (Rel. 48, Last sequence update)
13-SEP-2005 (Rel. 48, Last annotation updat
   CS021 MOUSE
Q9D279;
   SEQUENCE
   Coiled coil.
  uge
  This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its
   The German cDNA consortium;
Submitted (NOV-2004) to the EMBL/GenBank/DDBJ databases.
  TISSUE=Kidney
   Pongo pygmaeus (Orangutan).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
  13-SEP-2005 (Rel. 48, Created)
13-SEP-2005 (Rel. 48, Last seq
13-SEP-2005 (Rel. 48, Last ann
Protein C19orf21 homolog.
  NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA]
  NCBI_TaxID=9600;
   PONPY
  MOUSE
  as long as its content is in no way modified and this statement
   _TaxID=10090;
   574
  568
   CR858675; CAH90887.1;
  33;
  1 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
   35;
  Similarity
   ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
   ALFPEVFSPTPDESCDQNSRSSSQASGITGSYSVS
  ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS
   551
685
   100.0%;
ilarity 100.0%;
Conservative 0
  Conservative
   AA;
  STANDARD;
   STANDARD;
   575
   75892 MW;
  94.3%;
  Last sequence update)
Last annotation updat
   0,
   -; mRNA.
  Score 165; DB 1
Pred. No. 2e-12;
1; Mismatches
   Potential
   Score 175; DB 1
Pred. No. 1e-13;
; Mismatches
  PRT;
   PRT;
   A3A99F4343396E81 CRC64;
   685
  648
   update)
  update)
  DB 1; Length 685;
   ₿
   DB 1;
   608
   35
  602
  35
   <u>.</u>
  <u>,</u>
   Length 679;
  Indels
   Indels
   <u>.</u>
  0
  Gaps
   Gaps
  Η,
  is not
  0
   0
```

RESULT 4
Q4QE28\_LEIMA
ID Q4QE28\_L
AC Q4QE28;
DT 13-SEP-2

Q\(\bar{q}\)QE28\_LEIMA PRELIMINARY; Q4QE28; 13-SEP-2005 (TrEMBLrel. 31,

Created)

PRT;

746

밁 8

```
RA Kanai A., Kawaji H., Kawasawa Y., Kedzierski R.M., King B.L.,
Konagaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A.,
RA Maglott D.R., Maltais L., Marchionni L., McKenzie L., Miki H.,
RA Magashima T., Numata K., Okido T., Pavan W.J., Pertea G., Pesole G.,
RA Ravasi T., Reed J.C., Reed D.J., Reid J., Ring B.Z., Ringwald M.,
RA Ravasi T., Reed J.C., Reed D.J., Reid J., Ring B.Z., Ringwald M.,
RA Sandelin A., Schneider C., Semple C.A., Setou M., Shimada K.,
RA Sultana R., Takenaka Y., Taylor M.S., Teasdale R.D., Tomita M.,
RA Verardo R., Wagner L., Wahlestedt C., Wang Y., Watanabe Y., Wells C.,
RA Wilming L.G., Wynshaw-Boris A., Yanagisawa M., Yang I., Yang L.,
RA Yuan Z., Zavolan M., Zhu Y., Zimmer A., Carninci P., Hayatsu N.,
RA Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,
RA Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,
RA Hirozane-Kishikawa T., Konai J., Aizawa K., Arakawa T., Fukuda S.,
RA Hara A., Hashizume W., Imotani K., Ishii Y., Itoh M., Kagawa I.,
RA Miyazaki A., Sakai K., Sasaki D., Shibata K., Shinagawa A.,
RA Miyazaki A., Sakai K., Sasaki D., Shibata K., Shinagawa A.,
Ra Nirney P. Hayshizi W., Waterston R., Lander E.S., Rogers J.,
Ra Nirney P. Hayshizi W., Waterston R., Lander E.S., Rogers J.,
   AXEDILINE-2238855; Pubmed-12477932; DOI=10.1073/pnas.242603899;

RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Brownstein M.J., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

RA Raha S.S., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

RA Rahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

RA Rodriguez A.C., Grinwood J., Schmutz J., Myers R.M.,

RA Rodriguez A.C., Grinwood J., Schmutz J., Myers R.M.,

RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;

"Generation and initial analysis of more than 15,000 full-length human

"Generation and initial analysis of more than 15,000 full-length human
  Matches
   Query Match
Best Local
  Birney E., Hayashizaki Y.;
"Analysis of the mouse transcriptome based 60,770 full-length cDNAs.";
  EMBL; AK020266; BAB32049.1; -; mRNA.
EMBL; BC013508; AAH13508.1; -; mRNA.
Ensembl; ENSMUSG00000035852; Mus musculus
   This Swiss-Prot entry is copyright. It is produce between the Swiss Institute of Bioinformatics at the European Bioinformatics Institute. There are use as long as its content is in no way modified
   Nature
   STRAIN=FVB/N;
   SEQUENCE
  COILED
  Coiled
   MGI; MGI:1926156; 9130017N09Rik.
  NUCLEOTIDE SEQUENCE [LARGE
  removed.
   mouse cDNA sequences.";
c. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
  COIL.
   \vdash
   420:563-573 (2002) .
  28;
   Similarity
AFFPEVFSPVPAEDESHEQDSRSSSRASGITGSYSVS
                                      ALFPEVFSPTP--DENSDQNSRSSSQASGITGSYSVS
   648 AA;
  Conservative
   TISSUE=Colon;
   534 I
72281 MW;
   75.4%;
75.7%;
  SCALE
  4,
   Score 132; DB 1;
Pred. No. 3.3e-08;
  Potential
   1E395B70763B3D1F CRC64;
  Mismatches
  MRNA].
   is produced
  g
  <u>ب</u>
  are no
  functional annotation
570
   35
  Length 648;
   and the EN
   and this statement
  Indels
  restrictions
  EMBL
  a collaboration
MBL outstation -
  2
   outstation
  Gaps
  .
G:
   с
,
  9
   18
  얁
   not
  ۲,
```

```
SO RELEASE OF THE SO OF TH
   OR BROUTH OR BRO
   밁
  ঠ
  ঠ
밁
   Query Match
Best Local S
Matches 14
  Matches
   Query Match
  Peacock C.S., Murphy L., Ivens A.C., Berriman M., Blackwell J., Smith D., Collins M., Fosker N., Harris D., Oliver K., O'Neil S., Saunders D., Seeger K., Warren T., Rajandream M., and Barrell B.G.; Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.

EMBL, CT005257; CAJ03461.1; -; Genomic_DNA.

Hypothetical protein.

Hypothetical protein.

SEQUENCE 746 AA; 83082 MW; 3A3CCD5AA6ABA639 CRC64;
   EMBL; AC11707
Hypothetical
SEQUENCE 54
  Leishmania major.
Eukaryota; Euglenozoa;
EURI_TaxID=5664;
  Hypothetical protein. ORFNames=LmjF18.0140;
  MEDLINE=22092622; PubMed=12097910; DOI=10.1038/nature00847; Gloeckner G., Bichinger L., Szafranski K., Pachebat J.A., Banker A.T., Dear P.H., Lehmann R., Baumgart C., Parra G., Abril J.F., Guigo R., Kumpf K., Tunggal B., Cox E., Quail M., Platzar M., Rosenthal A., Noegel A.A.; "Sequence and analysis of chromosome 2 of Dictyostellum disc Nature 418:79-85(2002).
   Lehmann R., Baumgart
Tunggal B., Cox E., (
Submitted (MAY-2002)
  Dictyostelium discoideum
Eukaryota; Mycetozoa; Dic
   Hypothetical protein.
  01-OCT-2002 (TrEMBLrel.
01-OCT-2002 (TrEMBLrel.
01-PEB-2005 (TrEMBLrel.
  Q8MP25 DICDI PRELIMINARY;
Q8MP25; Q8T170;
  STRAIN-Friedlin;
  NUCLEOTIDE SEQUENCE
  13-SEP-2005
   Submitted (MAR-2003) to the EMBL/GenBank/DDBJ EMBL; AC123513; AAM44371.1; -; Genomic_DNA. EMBL, AC117070; AAM09347.2; -; Genomic_DNA.
   Gloeckner G.,
   STRAIN=AX4;
   NCBI_TaxID=44689;
   STRAIN-AX4;
  STRAIN-AX4;
  NUCLEOTIDE
   NUCLEOTIDE SEQUENCE.
  Baumgart
   NUCLEOTIDE SEQUENCE.
  DICDI
  Local
   554
   101
   13,
   σ
  2 LFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 35
  Similarity
   Similarity
  ဂ
   VFSPTPDENSDQNSRSSSQASGITGSYSVS 35
   LLSTSPDQMHDSHSTSSSQTGGVQGALSPS
   SEQUENCE.
   545 AA; (
  (TrEMBLrel.
   Conservative
   Eichinger L.,
laumgart C., Pa
   nger L., Szafranski K., Pachebat J., Dear P
t C., Parra G., April J.F., Guigo R., Kumpf
Quail M.A., Platzer M., Rosenthal A., Noeg
   63517 MW;
   36.6%;
  34.9%;
  ូ
   pum (Slime mold).
Dictyosteliida;
  Kinetoplastida; Trypanosomatidae; Leishmania
  31,
31,
   22,
  the EMBL/GenBank/DDBJ databases.
  Last
Last
   Last
   Last annotation update)
  6,
   Created)
   Score 61; DB:
Pred. No. 37;
6; Mismatches
  6
  Score 64;
Pred. No.
   7ED31B403D7874EB
   Mismatches
  sequence update)
   sequence update)
   annotation update)
  2 of Dictyostelium discoideum.";
   Dictyostelium
   545
  DB
22;
  583
   ₿
  2
   2
   11;
   14;
   databases
  Length 746;
   Length 545;
   CRC64;
  Parra G.,
., Quail M.A.,
   Indels
   Indels
  Kumpf K.,
Noegel A.A.;
   0
   0
   Gaps
  Gaps
   0
   0
```

```
RESULT 7

Q54VV1_DICDI
ID Q54VV1_DICDI PRELIMINARY;
AC Q54VV1;
AC 
  RESULT 6
Q555M6 I
ID Q555M6 I
ID Q555M6 I
ID Q555M6 I
ID Q555M6 I
ID Q555M6 I
ID G55M6 I
   묽
  S
  RA Suggang R., Berrinan M., Song J., Olsen R., Szafranski K., Xu Q.,
RA Tunggal B., Kummerfeld S., Madera M., Konfortov B.A., Rivero F.,
RA Bankier A.T., Lehmann R., Hamlin N., Davies R., Gaudet P., Fey P.,
RA Bankier X., Chen G., Saunders D., Sodergren E., Davis P.,
RA Filcher K., Chen G., Saunders D., Sodergren E., Davis P.,
RA Kerhornou A., Nie X., Hall N., Anjard C., Hemphill L., Bason N.,
RA Kerhornou A., Nie X., Hall N., Anjard C., Hemphill L., Bason N.,
RA Kerhornou A., Nie X., Hall N., Anjard C., Hemphill L., Bason N.,
RA Kerhornou A., Nie X., Hall N., Anjard C., Hemphill L., Bason N.,
RA Kerhornou A., Nie X., Hall N., Anjard C., Hemphill L., Bason N.,
RA Kerhornou A., Nie X., Van Driessche N., Cronin A., Goodhead I.,
RA Cooper J., Haydock S., Van Driessche N., Cronin A., Goodhead I.,
RA Mardroper A., Felder M., Thangavelu M., Johnson D., Knights A.,
RA Loulseged H., Mungall K., Oliver K., Price C., Quail M.A.,
RA Mardroper A., Felder M., Thangavelu M., Johnson D., Knights A.,
RA Urushihara H., Hernandez J., Rabbinowitsch E., Steffen D., Sanders M.,
RA Mardroper A., Schapp S., Simmonds M., Spiegler S., Tivey A.,
RA Sugano S., White B., Walker D., Woodward J., Winckler T., Tanaka Y.,
RA Sugano S., White B., Walker D., Woodward J., Winckler T., Tanaka Y.,
RA Khisholm R.L., Gibbs R., Loomis W.F., Platzer M., Kay R.R.,
Williams J., Dear P.H., Noegel A.A., Barrell B., Kuspa A.,
Therefore O. The Social amoeba Dictyostellum discoideum.";
   Query Match
Best Local Similarity
   Matches
  Hypothetical protein ORFNames=DDB0217512;
  Q555M6 DICDI
Q555M6;
  Hypothetical SEQUENCE 8
   Eichinger
   STRAIN=AX4;
  NUCLEOTIDE
   Eukaryota; Mycetozoa;
   Dictyostelium discoideum
   13-SEP-2005 (TrEMBLrel.
   Sucgang R., Berriman M., Song J., Olsen R., Tunggal B., Kummerfeld S., Madera M., Konfor Bankier A.T., Lehmann R., Hamlin N., Davies Pilcher K., Chen G., Saunders D., Sodergren
   Dictyostelium discoideum (Slime mold).
Bukaryota; Mycetozoa; Dictyosteliida;
   Nature 0:0-0(2005).
   13-SEP-2005
13-SEP-2005
  CAUTION: The sequence shown here is derived EMBL/GenBank/DDBJ whole genome shotgun (WGS)
   preliminary data.
   TaxID=44689;
   AAFI01000027; EAL70318.1; -; Genomic_DNA
   14;
  N
  LFPEVFSPTPDENSDONSRSSSOASGITGSYSVS
   .
  5 (TrEMBLrel. 31,
5 (TrEMBLrel. 31,
5 (TrEMBLrel. 31,
  al protein.
855 AA; 1
  SEQUENCE
   (TrEMBLrel. 31, (TrEMBLrel. 31, (TrEMBLrel. 31,
   Conservative
  PRELIMINARY;
   Pachebat
   Pachebat J.A.,
   34.9%;
  101382 MW;
   pum (Slime mold).
Dictyosteliida;
   J.A.,
   .A., Gloeckner G., Rajandream w.-n.,
Song J., Olsen R., Szafranski K., Xv.
Madera M., Konfortov B.A., Rivero
, Madera M., Konfortov B.A., Rivero
   Last
Last
   Created)
  6,
  Last sequence up
   Score 61;
Pred. No.
   Gloeckner G., Rajandream M.-A.,
g J., Olsen R., Szafranski K., l
   Created)
  E117ED7EB114AA3E CRC64;
  Mismatches
, Sodergren E., I
jard C., Hemphil
   sequence
  annotation
   1201
   Dictyostelium
  855
  Dictyostelium
   DB
   update)
  update)
   B
   (WGS)
  update)
   171
  35
  update)
  14;
   Length 855;
  from
   Gaudet
   entry
  Indels
   .
,
   which
   Fey P.,
  Χu Q.,
  0,
   18
  Gaps
  .3
  0
```

N --

```
RA Farbrother P., Desany B., Just E., Morio T., Rost R., Churcher C.,
Cooper J., Haydock S., van Driessche N., Cronin A., Goodhead I.,
RA Muzny D., Mourier T., Pain A., Lu M., Harper D., Lindsay R.,
RA Hauser H., James K., Quiles M., Mohan M.B., Salto T., Buchrieser C.,
RA Hauser H., Mungall K., Oliver K.,
Loulseged H., Mungall K., Oliver K.,
RI Loulseged H., Mungall K., Oliver R., Stefen D., Knights A.,
RI Loulseged H., Mungall K., Oliver R., Stefen D., Sanders M.,
RI Loulseged H., Mungall K., Oliver R., Stefen D., Sanders M.,
RI Loulseged H., Mungall K., Oliver R., Stefen D., Sanders M.,
RI Loulseged H., Mungall K., Oliver R., Stefen D., Sanders M.,
RI J., Kohara Y., Sharp S., Simmonds M., Spiegler S., Tivey A.,
RI J., Kohara Y., Sharp S., Simmonds M., Spiegler S., Tivey A.,
RI Shaulsky G., Schleicher M., Weinstock G., Rosenthal A., Cox E.C.,
RA Shaulsky G., Schleicher M., Weinstock G., Rosenthal A., Cox E.C.,
RA Chisholm R.L., Gibbs R., Loomis W.F., Platzer M., Kay R.R.,
RI Hillams J., Dear P.H., Noegel A.A., Barrell B., Kuspa A.,
"The genome of the social amoeba Dictyostelium discoideum.";
RL Nature 0:0-0/2005).

CC EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
   A Sucyang R., Berriman M., Song J., Olsen R., Safranski K., Xu Q.,
Xi Tunggal B., Kummerfeld S., Madera M., Konfortov B.A., Rivero F.,
Xi Bankier A.T., Lehmann R., Hamlin N., Davies R., Gaudet P., Fey P.,
Xi Pilcher K., Chen G., Saunders D., Sodergren E., Davis P.,
Xi Kerhornou A., Nie X., Hall N., Anjard C., Hemphill L., Bason N.,
Xi Kerhornou A., Nie X., Hall N., Anjard C., Hemphill L., Bason N.,
Xi Kerhornou A., Nie X., Hall N., Anjard C., Hemphill L., Bason N.,
Xi Kerhornou A., Nie X., Hall N., Anjard C., Hemphill L., Bason N.,
Xi Kerhornou A., Nie X., Hall N., Anjard C., Hemphill L., Bason N.,
Xi Kerhornou A., Nie X., Hall N., Anjard C., Hemphill L., Bason N.,
Xi Kerhornou A., Nie X., Hall N., Anjard C., Homphill L., Bason N.,
Xi Kerhornou A., Nie X., Hall N., Anjard C., Houstheaf I.,
Xi Kooper J., Haydock S., van Driessche N., Croini A.,
Xi Kerhornou A., Nie X., Van Driessche N., Saito T., Buchrieser C.,
Xi Mardroper A., Felder M., Thangavelu M., Johnson D., Krights A.,
Xi Loulseged H., Mungall K., Oliver K., Price C., Quail M.A.,
Xi Loulseged H., Mungall K., Oliver K., Price C., Quail M.A.,
Xi Loulseged H., Hernandez J., Rabbinowitech E., Steffen D., Sanders M.,
Xi Ma J., Kohara Y., Sharp S., Simmonds M., Spiegler S., Tivey A.,
Xi Sugano S., White B., Walker D., Woodward J., Winckler T., Tanaka Y.,
Xi Shaulsky G., Schleicher M., Weinstcock G., Rosenthal A., Cox E.C.,
Xi Miliams J., Dear P.H., Noegel A.A., Barrell B., Kuspa A.,
Xi The genome of the social amoeba Dictyostelium discoideum.",
  Query Match
Best Local S
Matches 13
   13-SEP-2005 (TrEMBLrel. 31, Created)
13-SEP-2005 (TrEMBLrel. 31, Last sequence update)
13-SEP-2005 (TrEMBLrel. 31, Last annotation update)
13-SEP-2005 (TrEMBLrel. 31, Last annotation update)
CHD gene family protein containing chromodomain, he
DNA-binding domain.
   "The genome of the social Nature 0:0-0(2005).
-!- CAUTION: The sequence
  Name=DDB0220643; ORFNames=DDB0220643;
Dictyostelium discoideum (Slime mold).
Eukaryota; Mycetozoa; Dictyosteliida; Dictyostelium
   Q54CF8 DICDI
Q54CF8;
  EMBL; AAFI01000066; EAL67286.1; -; Genomic_DNA.
Hypothetical protein.
SEQUENCE 1201 AA; 136978 MW; DDE248A6414817
DNA-binding; Helicase.
SEQUENCE 3071 AA; 3
   EMBL; AAFI01000274; EAL60858.1; -; Genomic_DNA.
   Eichinger
   STRAIN=AX4;
  NUCLEOTIDE SEQUENCE
  DICDI
  preliminary data.
  preliminary data.
  EMBL/GenBank/DDBJ whole
   84
   6 VFSPTPDENSDQNSRSSSQASGITGSYSVS 35
  l Similarity
  IISPTPQKSSSSSSSSSSSSSSSSSSSS 113
   -
   Conservative
   PRELIMINARY;
  Pachebat
  34.3%;
     345579
  J.A.,
  shown here is derived
  WW,
   9
  genome
   Gloeckner G., Rajandream M.-A.,
g J., Olsen R., Szafranski K., Xu_Q.,
  Score 60;
Pred. No.
   Mismatches
  DDE248A6414817D4
  71AD73435CD666B8
   chromodomain, helicase domain,
  shotgun
   3071
   B
  2e+02
   A
   <u>ب</u>
  (WGS)
   Length 1201;
   from an
   entry which
   Indels
   CRC64;
   0
   Gaps
   0
```

밁 δ

```
RESULT
OSBSP7
ID 95
AC 95
DT 10
CC EN
CC E
   밁
   S
  片
   S
  Query Match
Best Local S
Matches 10
  Query Match
Best Local S
Matches 16
Birren B., Nusbaum C., Abouelleil A., Allen N., Anderson S., Arachchi H.M., Barna N., Bastien V., Bloom T., Boguslavkiy L., Boukhgalter B., Butler J., Calvo S.E., Camarata J., Chang J., Boukhgalter B., Butler J., Cook A., Cooke P., Corum B., DeArellano Diaz J.S., Dodge S., Dooley K., Dorris L., Elkins T., Engels R., Erickson J., Faro S., Ferreira P., FitzGerald M., Gage D., Galagai Gardyna S., Gnerre S., Graham L., Grand-Pierre N., Hafez N., Hagopian D., Hagos B., Hall J., Horton L., Hulme W., Iliev I., Jaffe D., Johnson R., Jones C., Kamal M., Kamat A., Karatas A., Kells C., Landers T., Levine R., Lindblad-Toh K., Liu G., Lui A., Kalls C., Landers T., Levine R., Lindblad-Toh K., Liu G., Lui A., Kalls C., Mabbitt R., MacLean C., Macdonald P., Major J., Manning
   Xu P., Widmer G., Wang Y., Ozaki L.S., Alves J.M., Serrano M.G.,
Puiu D., Manque P., Akiyoshi D., Mackey A.J., Pearson W.R., Dear P.H.,
Bankier A.T., Peterson D.L., Abrahamsen M.S., Kapur V., Tzipori S.,
  Cryptosporidium hominis.
Eukaryota; Alveolata; Apicomplexa;
Cryptosporidiidae; Cryptosporidium
   RNA-binding protein. ORFNames=Chro.80392;
  Aspergillus nidulans FGSC A4.
Eukaryota; Fungi; Ascomycota;
Eurotiales; Trichocomaceae; Er
  7_EMENI
Q5B5F7_EMENI PRELIMINARY;
  SEQUENCE
   10-MAY-2005 (TrEMBLrel.
10-MAY-2005 (TrEMBLrel.
10-MAY-2005 (TrEMBLrel.
   Q5CNV9;
  Q5CNV9
  STRAIN-FGSC
  Hypothetical protein.
ORFNames=AN4223.2;
  10-MAY-2005
   10-MAY-2005
10-MAY-2005
   Q5B5F7;
  EMBL; AAEL01000005; EAL38288.1; -; Genomic_DNA
   Nature 431:1107-1112
   STRAIN=TU502;
  NUCLEOTIDE SEQUENCE.
   NCBI_TaxID=237895;
  NUCLEOTIDE SEQUENCE.
   NCBI_TaxID=227321;
   Buck G.A.;
  InterPro; IPR007109; Brix.
Pfam; PF04427; Brix; 1.
  "The genome of Cryptosporidium hominis.";
  CRYHO
   Local Similarity
   2253
  259
  _CRYHO
  10;
  ທ
  16;
   Similarity
   PEVFSPTPDENSDONSRSSSOAS 26
  EVKIPTSSGNRDENOMGLSERSGIYTGKVSVS 290
  EVESPTPDENSDONSRSSSOASGI-TGSYSVS 35
   PNTFSPNPTSNNDQNNNNNNNNNS 2275
   5 (TrEMBLrel. 30,
5 (TrEMBLrel. 30,
5 (TrEMBLrel. 30,
   (TrEMBLrel. 30, (TrEMBLrel. 30, (TrEMBLrel. 30,
  363 AA;
  34.0%;
ilarity 50.0%;
Conservative
  Conservative
  PRELIMINARY;
  40988
   43.5%;
  MW;
   Created)
Last sequence update)
Last annotation updat
   a; Pezizomycotina; Eurotiomycetes;
Emericella.
   Last sequence update)
Last annotation update)
   Created)
  Score 60; DB Pred. No. 3.7e
5; Mismatches
  <u>ს</u>
  2
  Pred. No. 30;
2; Mismatches
   Score 59.5;
Pred. No. 3
  F42649CBF10B866D
  Coccidia, Eimeriida,
  2418
  363
   .7e+02;
   DB 2;
  ጅ
  ጅ
   update)
  13;
   8
  Length 3071;
   CRC64;
  Length 363;
   Indels
   Indels
   Galagan
  ļ
  0
  Gaps
  Gaps
            ٦.
   <u>~</u>
   J.
  ۲
  0
```

```
RESULT 12
Q4WKQ ASE
ID Q4WKC
AC Q4WK
AC Q4WK
AC 13-SE
DT 13-SE
DT 13-SE
DT 13-SE
DT Hypot
GN ORPNU
OS Aspen
OC Eurool
OX NCBI
  RESULT
Q6YY15_
  ð
  밁
  S
   용
  Query Match
Best Local S
Matches 14
   Query Match
Best Local S
Matches 13
   Matthews C., Mauceli E., McCarthy M., Meldrim J., Meneus L.,
Mihova T., Mlenga V., Murphy T., Naylor J., Nguyen C., Nicol R.,
Nielsen C.B., Norbu C., O'Connor T., O'Donnell P., O'Neil D.,
Oliver J., Peterson K., Phunkhang P., Pierre N., Purcell S.,
Oliver J., Ramasamy U., Raymond C., Retta R., Rise C., Rogov P.,
Rachupka A., Ramasamy U., Raymond C., Retta R., Rise C., Rogov P.,
Roman J., Schauer S., Schupback R., Seaman S., Severy P., Smirnov S.,
Smith C., Spencer B., Steange-Thomann N., Stojanovic N., Stubbs M.,
Talamas J., Tesfaye S., Theodore J., Topham K., Travers M.,
Vassiliev H., Venksteraman V.S., Viel R., VO A., Wang S., Wilson B.,
Vassiliev H., Venksteraman V.S., Viel R., VO A., Wang S., Zody M.,
Talamas J., Tesfaye S., Theodore J., Topham K., Travers M., Zody M.,
Talamas J., Venksteraman V.S., Viel R., VO A., Wang S., Wilson B.,
Vassiliev H., Venksteraman V.S., Viel R., VO A., Wang S., Zody M.,
Talamas J., Tesfaye S., Theodore J., Topham K., Travers M., Zody M.,
Talamas J., Venksteraman V.S., Viel R., VO A., Wang S., Wilson B.,
Talamas J., Venksteraman V.S., Viel R., Vo A., Wang S., Wilson B.,
Talamas J., Venksteraman V.S., Viel R., Vo A., Wang S., Wilson B.,
Talamas J., Tesfaye S., Theodore J., Topham K., Travers M.,
Talamas J., Tesfaye S., Theodore J., Topham K., Travers M.,
Talamas J., Tesfaye S., Theodore J., Topham K., Travers M.,
Talamas J., Tesfaye S., Theodore J., Topham K., Travers M.,
Talamas J., Tesfaye S., Theodore J., Topham K., Travers M.,
Talamas J., Tesfaye S., Theodore J., Topham K., Travers M.,
Talamas J., Tesfaye S., Theodore J., Topham K., Travers M.,
Talamas J., Tesfaye S., Theodore J., Topham K., Travers M.,
Talamas J., Tesfaye S., Theodore J., Topham K., Travers M.,
Talamas J., Tesfaye S., Theodore J., Topham K., Travers M.,
Talamas J., Tesfaye S., Theodore J., Topham K., Travers M.,
Talamas J., Tesfaye S., Theodore J., Theodore J.
   Q0 ASPFU
Q4WKQ0 /
Q4WKQ0 /
   "Genome Sequence of Aspergillus nidulans.";
Submitted (JAN-2004) to the EMBL/GenBank/DBJ of
EMBL; AACD01000068; EAA59322.1; -;
InterPro; IPR000074; ApoAl A4 E.
InterPro; IPR011992; EF-Hand Type.
   T 11
S ORYSA
OGYY15 ORYSA PRELIMINARY;
QGYY15;
   Hypothetical protein; Repeat
   Wu X., Wyman D.,
Aspergillus funigatus Af293.

Bukaryota; Fungi; Ascomycota

Eurotiales; Trichocomacese; mi

NCBI_TaxID=330879;
   13-SEP-2005 (TrEMBLrel. 31, 13-SEP-2005 (TrEMBLrel. 31, 13-SEP-2005 (TrEMBLrel. 31,
   EMBL; AP005644; BAD17485.1; -; Genomic_DNA Gramene; Q6YY15; -.
  Sasaki T., Matsumoto T., Kat
Submitted (AUG-2002) to the
  Oryza sativa (japonica cultivar-group).
Eukaryota; Viridiplantae; Streptophyta; E
Spermatophyta; Magnoliophyta; Liliopsida;
  Hypothetical protein O
  05-JUL-2004
05-JUL-2004
  Lander E.
  Hypothetical protein. ORFNames=Afulg01700;
  SEQUENCE
  NUCLEOTIDE
  Spermatophyta; Magnoliophyta;
Ehrhartoideae; Oryzeae; Oryza.
   lypothetical
   2287
   415
  w
   13,
  ASPFU
  æ
  Similarity
  Similarity
   SPTPDENSDONSRSSSOASGITGSYS 33
  al protein.
  2418 AA;
  SEQUENCE.
   (TrEMBLrel.
  Conservative
   Conservative
  (TrEMBLrel.
   (TrEMBLrel.
  PRELIMINARY;
   Oryzeae;
   Young G., Zainoun J.,
  68389 MW;
   el. 27, Last sequence update)
el. 27, Last annotation update)
OSJNBb0056I22.34.
  267172 MW;
  33.7%;
  34.0%;
   27,
27,
   Катауове Ү.;
   Created)
Last sequ
  Score 59.5; Di
Pred. No. 3.2e
7; Mismatches
  EMBL/GenBank/DDBJ
   Created)
                      mitosporic
   4; Mismatches
  Pred.
  Score 59;
Pred. No.
                        Pezizomycotina; Eurotiom 
itosporic Trichocomaceae;
  PRT;
  6B3E83B66DA44D89 CRC64;
  PRT;
   sequence update) annotation updat
  0165BC0E8CC056B0 CRC64;
  59.5;
  1044 AA.
  669
   Zembek L.,
  85
  Embryophyta; Tracheophyta;
a; Poales; Poaceae;
  2e+02;
  ₹
   띪
   2
   update)
   2
   databases.
   9
   databases
                                       Eurotiomycetes;
   Length 669;
   Length 2418;
   Zimmer A.,
  Indels
                        Aspergillus
  ω
--
  0,
   Zody M.
  Gaps
  ري
ب
  0
```

```
SCALL CCCCTLL RAPER AND SERVING SERVIN
  S
   SOUR REPRESENTATION OF THE PROPERTY OF THE PRO
   RESULT 13
Q5ZJA1_CHICK
   밁
   RA BOWYER F., CHEH D., COLLEHS M., PEDDLY M. P. PARTER N., PISCHORY N., FEDDLY M. T.V., FISCHORY R., RA GARCHAM M., FEDOROVA N., FEDDLY M., GODLE A., RA FOSKER N., FRASER A., GARCHA J.L., GARCHAM M.J., GODLE A., RA GOLDMAN G.H., GOMÍ K., GRÍFÍELD-JONDES S., GWAILIAM R., HAAS B., RA GADDANA H., HORINGH H., KILANDY J., KODAYASHI T., KULKARNI R., RA KELLER N., KHOURI H., KILANDE J., KODAYASHI T., KULKARNI R., RA KELLER N., KHORNI H., KILANDE J., P., LI W., LORD A., LU C., RA KAMAGAI T., LATTON A., LATTON J., HONDAWASHI T., KULKARNI R., RA KAMAGAI T., LATTON Y., MAPJ GS., MILIER B.L., MODAMOND Y., MOLINA M., MONOD M., RA MAJOROS W.H., MAY GS., MILIER B.L., MODAMOND Y., MOLINA M., MONOD M., RA MAJOROS W.H., MAY GS., MILIER B.L., MODAMOND Y., MOLINA M., MONOD M., RA PENDLY M.A., PERTEA M., PRICE C., PITCHÀRD B.L., QUAIL M.A., PERTEA M., PRICE C., PITCHÀRD B.L., QUAIL M.A., RA REDALIVA M.A., PERTEA M., RAJOROS M., RADIONO G.D., RODRINGUEZ DE CORDODA S., RODRIGUEZ-PENA J.M., RA RONNING C.M., RULTER S., SAIZBERG S., SQUARCES M., RODRIGUEZ-PENA J., RA RONNING C.M., RULTER S., SAIZBERG S., SQUARCES S., SAIZBERG S., SQUARCES S., RODRIGUEZ-PENA J., REICHARD J., RAJOROS S., RODRIGUEZ-PENA J., REICHARD J., VAZQUEZ DE ALDONA C.R., WEIGMAN J., RA WHITE O., WOODWARD J., YU J.-H., FRASER C., GALAGAN J.E., ASAI K., RA WACHIGA M., HALI N., BAITCEL B., DENNING D.W.;

RT ASPETGILLUS FUNDAMENTAL SANDER C. THE EMBL/GENBARK/DBJ databases.

RT ASPETGILLUS FUNDAMENTAL SANDER C. ADVINCE FORM AND ANY MAY DE CONTROLLOS FORM ANY MAY DE CON
  Query Match
Best Local S
Matches 12
   Query Match
Best Local
  Arroya J., Berriman M., Abe K., Archer D.B., Bermejo C
Bowyer P., Chen D., Collins M., Coulsen R., Davies R.,
  NUCLEOTIDE SE
STRAIN-Af293;
  genefunction analysis.";
Genome Biol. 6:R6-R6(2005).
EMBL; AJ720533; CAG32192.1;
  STRAIN=CB; TISSUE=Bursa;
Caldwell R.B., Kierzek A.M., Arakawa H.
Fiedler P., Kutter S., Blagodatski A.,
Plachy J., Carninci P., Hayashizaki Y.,
"Full-length cDNAs from chicken bursal
  Q5ZJA1_CHICK PRELIMINARY;
Q5ZJA1;
25-OCT-2004 (TrEMBLrel. 2
  EMBL; AAHF01000007; E
Hypothetical protein.
SEQUENCE 1044 AA;
  Nierman
  Hypothetical
  25-OCT-2004
25-OCT-2004
   Hypothetical protein. SEQUENCE 275 AA; 3
   Pfam; PF01399; PCI; 1.
SMART; SM00088; PINT; 1.
   Eukaryota; Metazoa;
  Gallus gallus (Chicken).
  ORFNames=RCJMB04
   NUCLEOTIDE
   NCBI_TaxID=9031;
   Archosauria;
   InterPro; IPR000717; PCI.
   CAUTION: The sequence shown here
   preliminary data.
   EMBL/GenBank/DDBJ whole genome shotgun (WGS)
   983
  σ
  12;
  E
   Similarity
  Similarity
  VFSPTPDENSDQNSRSSSQASGITGSYS 33
   IFSPPSDDDSDESESSSSSSSSSSSSS 1010
   SEQUENCE
   SEQUENCE
  (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
  Pain A.,
  Conservative
   Aves;
  protein
  _19110;
   Neognathae;
   Chordata;
   EAL87882.1; -; Genomic_DNA.
   30404
   33.1%;
36.7%;
  33.7%;
42.9%;
  Anderson M.J.,
  113308
  28,
   ₹
::
  ME:
  Last sequence update)
Last annotation update)
  Created)
  Score 59;
Pred. No.
   Score
   Craniata; Vertebrata; Euteleostomi;
; Galliformes; Phasianidae; Phasianinae;
  TIRNA
   PRT;
   506BAE2AEEE0CFEE CRC64;
  Mismatches
  C3B1D83A1826E529 CRC64;
       No.
  Wortman J., Kim
  H.,
   is derived
   275
  .1.4e+02
DB
41;
  Kostovska D.,
, Buerstedde J
  lymphocytes to facilitate
  B
   Bezzubov
   ₿
  N
   2
  9
  Length 1044;
   Length 275
   from
   entry which
  ¥.,
  Rodriguez-Pena J.M.,
  Indels
  J.M.;
  filamentous fungus
  R., Dyer P.S.,
   an
  Koter
  .Stanley.,
   Zaim
  Bennett J.,
  ¥.,
  Weidman J.,
  <u>.</u>
  Gaps
   .₹
```

```
RESULT
Q9VJ42
ID Q9VJ42
AC Q9
DT 01
DT 01
DT 02

  S
   밁
   S
   밁
  Matches
  Query Match
Best Local
   Matches
   TLT 14

197 DICDI

Q54T97 DICDI :

Q54T97;

Q54T97;

13-SEP-2005 ('
  Q9VJ42 DROME
Q9VJ42;
01-MAY-2000 (
01-OCT-2002 (
   Eichinger L., Pachebat J.A., Gloeckner G., Rajandream M.-A., Sucgang R., Berriman M., Song J., Olsen R., Szafranski K., Xu Q Tunggal B., Kummerfeld S., Madera M., Konforttov B.A., Rivero F. Bankler A.T., Lehmann R., Hamlin N., Davies R., Gaudet P., Fey Pilcher K., Chen G., Saunders D., Sodergren E., Davis P., Pilcher K., Chen G., Saunders D., Sodergren E., Davis P., Kerhornou A., Nie X., Hall N., Anjard C., Hemphill L., Bason N. Farbrother P., Desany B., Just E., Movio T., Rost R., Churcher Parbrother P., Desany B., Just E., Movio T., Rost R., Churcher P., Desany B., Just E., Movio T., Rost R., Churcher P., Desany B., Just E., Movio T., Rost R., Churcher P., Desany B., Just E., Movio T., Rost R., Churcher P., Desany B., Just E., Movio T., Rost R., Churcher P., Desany B., Just E., Movio T., Rost R., Churcher P., Desany B., Just E., Movio T., Rost R., Churcher P., Desany B., Just E., Movio T., Rost R., Churcher P., Desany B., Just E., Movio T., Rost R., Churcher P., Desany B., Just E., Movio T., Rost R., Churcher P., Desany B., Just E., Movio T., Rost R., Churcher P., Parker P., Desany B., Just E., Movio T., Rost R., Churcher P., P., Parker P., Parke
   Hypothetical protein. ORFNames=DDB0204281;
Neoptera; Endopterygota; Diptera; Brachycera; Ephydroidea; Drosophilidae; Drosophila.
NCBI_TaxID=7227;
[1]
   Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Hexapoda;
   Name=CG10600; ORFNames=CG10600;
   Hypothetical
SEQUENCE 1
   EMBL;
   Nature 0:0-0(2005).
   STRAIN=AX4;
  NUCLEOTIDE
   Eukaryota; Mycetozoa; Dictyosteliida; Dictyostelium
   13-SEP-2005
   15
DROME
  ctyostelium discoideum (Slime mold).
   preliminary data.
.; AAFI01000076; EAL66513.1; -;
   EMBL/GenBank/DDBJ whole
  CAUTION: The sequence shown here is derived
  438
  241
  11;
  IJ
   4
   l Similarity
12; Conserv
   EVFSPTPDENSDQNSRSSSQASGITGSYSV 34
   PFFFSPPPPQSSSTNSNSSSSSS 460
   PEVFSPTPDENSDQNSRSSSQAS
  ELREPAPGTNOROTSKKTSKAKGLRGSAKI
   il protein.
1331 AA;
  SEQUENCE
  (TrEMBLrel. (TrEMBLrel.
  (TrEMBLrel. 31, (TrEMBLrel. 31, (TrEMBLrel. 31,
   Conservative
  Conservative
   PRELIMINARY;
  PRELIMINARY;
  33.1%;
   154245
  13,
22,
25,
   Last sequence Last anno
   MW.
   Last sequence update)
Last annotation update)
   ω
--
  genome
  9
   Created)
   Pred. No. 2.5
); Mismatches
  Score 58;
Pred. No.
  Mismatches
  sequence update)
   26
   annotation
   D9CE766799F45D15
  Genomic_DNA.
  shotgun
  1377
   Konfortov B.A., Rivero F.,
  270
  .5e+02;
8;
   DB 2;
   ₿
  Insecta; Pterygota;
  ₽
   (WGS)
  13;
  Muscomorpha;
   Length 1331;
  from an
   entry
   CRC64;
  Indels
   Bason N.,
   which
  P., Fey P.,
  0,
   0,
   Ö
  Gaps
   Gaps
  3
  0
   0
     RA Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Golayne J.D.,
RA Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Galle R.F.,
RA George R.A., Levis S.E., Richards S., Ashburner M., Henderson S.N.,
RA Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
RA Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
RA Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
RA Ballew R.M., Basu A., Rayer E.G., Helt G., Nelson C.R., Miklos G.L.G.,
RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Burtis K.C., Blasen D.A., Butler H., Cadleu E., Center A., Chandra I.,
RA Gerry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Dodson K., Doup L.B., Downes M., Dugan-Rocha S., Dlukov B.C., Dunn P.,
RA Glodek R., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Harris N.L., Harvey D.A., Heiman T.J., Hernandez J.R., Houck J.,
RA Hostin D., Houston K.A., Howland T.J., Hernandez J.R., Houck J.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravit S., Kulp D., Lai Z.,
RA Menkulov G., Milshina N.V., Mobard T.J., Wei M.-H., Il Z., Liang Y., Lin X.,
RA Menkulov G., Milshina N.V., Mobard T.J., Muzny D.M., Nelson D.L.,
RA Menet B.E., Kennington K.A., Howland T.J., Wei M.-H., Il Z., Liang Y., Lin X.,
RA Harke B.E., Kennington K.A., Mobard T.J., Wei M.-H., Il Z., Liang Y., Lin X.,
RA Menet B.E., Kennington K.A., Mobard T.J., Wei M.-H., Il Z., Liang Y., Lin X.,
RA Harke B.E., Spradling A.C., Stapleton M., Skupski M.P., Smith T.,
RA Shue B.C., Staden-Kiamos I., Simpson M., Skupski M.P., Smith T.,
RA Shue B.C., Staden-Kiamos I., Simpson M., Skupski M.P., Smith T.,
RA Shue B.C., Staden-Kiamos I., Shang Y., Weinst-Ck G.M., Weissenbach J.,
RA Menet M. W., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,
The genome sequence of Drosophila melanogaster.";
RI, Keiner B. 287, 1286 (2000).
   NUCLEOTIDE SECU-
MEDLINE=22426069; Pubmeu-
MEDLINE=22426069; Pubmeu-
Crosby M.A., Mu
Hunang Y., K
  MEDLINE=22426065; PubMed=12537568; Celniker S.E., Wheeler D.A., Kronmiller B., Carlson J.W., Halper Celniker S.E., Wheeler D.A., Kronmiller B., Frise E., Hodgson A., Patel S., Adams M., Champe M., Dugan S.P., Frise E., Hodgson A., George R.A., Hoskins R.A., Laverty T., Muzny D.M., Nelson C.R., Pacleb J.M., Park S., Ffeiffer B.D., Richards S., Sodergren E.J. Svirskas R., Tabor P.E., Wan K., Stapleron M., Sutron G.G., Vent Weinstock G., Scherer S.E., Myers E.W., Gibbs R.A., Rubin G.M.; "Finishing a whole-genome shotgun: release 3 of the Drosophila melanogaster euchromatic genome sequence."; Genome Biol. 3:RESEARCH0079-RESEARCH0079 (2002).
   MEDLINE=22426069; PubMed=12537572;
Misra S., Crosby M.A., Mungall C.J., Matthews B.B., Campbell K.S.,
Hradecky P., Huang Y., Kaminker J.S., Millburn G.H., Prochnik S.E.
Smith C.D., Tupy J.L., Miltfield E.J., Bayraktaroglu L., Berman B.
Bettencourt B.R., Celniker S.E., de Grey A.D.N.J., Drysdale R.A.,
Harris N.L., Richter J., Russo S., Schroeder A.J., Shu S.Q.,
Harris N.L., Richter J., Russo S., Schroeder A.J., Shu S.Q.,
  Patel S., Frise E.,
Ashburner M., Celni
  NUCLEOTIDE SEQUENCE
MEDLINE=20196006; Po
  systematic
  Stapleton M.,
   Genome
   NUCLEOTIDE SEQUENCE.
   Science
                           "Annotation
  Lewis S.E.;
  "The transposable elements
   Kaminker J.S., Bergman C.
  MEDLINE=22426070; PubMed=12537573;
  NUCLEOTIDE SEQUENCE
   genomics
   Biol.
   287:2185-2195 (2000)
   perspective."
  review.":
                         of the Drosophila
  3:RESEARCH0084.1-RESEARCH0084.20(2002)
  Yamada
   Celniker
   PubMed=10731132; DOI=10.1126/science.287.5461.2185;
  0.4
  Wheeler D.A.,
  တ
   3
  Ashburner M.,
  of the
  Kronmiller
D.A., Lewis
                           melanogaster
  Drosophila melanogaster
  Gelbart
   B., Ca
                           euchromatic
  Carlson
  Σ.
Σ.
  ด.
พ.พ.
  Rubin G.M.;
  Rubin
   .W., Halpern
                           genome:
   euchromatin
  Svirskas
  G.M.,
```

Α.

9

. .

```
RL Genome Biol. 3:RESEARCH0083.1-RESEARCH0083.22(2002).

RN UCLEOTIDE SEQUENCE.

RP NUCLEOTIDE SEQUENCE.

RG Berkeley Drosophila Genome Project;

RA Celniker S., Carlson J., Wan K., Pfeiffer B., Frise E., George R.,

RA Hoskins R., Stapleton M., Pacleb J., Park S., Svirskas R., Smith E.,

RA Yu C., Rubin G.;

RT "Drosophila melanogaster release 4 sequence.";

RI Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases.

RI Submitted (MAR-2005) to the EMBL/GenBank/DDBJ databases.

RI Submitted (MAR-2005) to the EMBL/GenBank/DDBJ databases.

RI FlyBase;

RI FLY
```

Cocen mode sod sini

```
Minimum DB
Maximum DB
   Regult
No.
   Scoring table:
   Sequence:
   Title:
Perfect score:
   Run on:
   OM protein -
   Post-processing: Minimum Match 0% Maximum Match 10
   Total number of hits satisfying chosen parameters:
   pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed.
   and is derived by analysis of the total
   seq length: 0 seq length: 2000000000
  protein search, using sw model
   BLOSUM62
Gapop 10.0 , Gapext 0.5
   March
   572060 segs, 82675679 residues
  US-10-646-873-45
175
   Match Length DB
Issued_Patents_AA: *
  Maximum Match 100
Listing first 45
   ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
   GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd
  /cgm2_6/ptodata/1/iaa/5_COMB.pep:*
/cgm2_6/ptodata/1/iaa/6_COMB.pep:*
/cgm2_6/ptodata/1/iaa/H_COMB.pep:*
/cgm2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
/cgm2_6/ptodata/1/iaa/RE_COMB.pep:*
/cgm2_6/ptodata/1/iaa/RE_COMB.pep:*
   3, 2006, 13:35:46;
   362
437
2232
2232
2232
  100%
   US-09-252-991A-17733

US-09-921-099A-17

US-09-091-219-25

US-09-660-541-25

US-09-660-541-2
   US-09-050-516-45
US-10-278-547-45
US-09-050-516-47
  summaries
  US-09-248-796A-14575
US-09-248-796A-18493
  US-09-248-796A-15380
  US-09-487-558B-422
   SUMMARIES
   Search time 4.69388 Seconds (without alignments) 616.473 Million cell updates/sec
   distribution
  Description
                                      Sequence
Sequence
Sequence
  Sequence
Sequence
  Sequence
Sequence
  Sequence
Sequence
  Sequence
  Sequence
  Sequence
   Sequence
  Sequence
  Sequence
   Sequence
  Sequence
  Sequence
  Sequence
                                    e 25, Appli
2, Appli
3, Appli
314575, A
11493, A
11493, A
11493, A
11493, Appl
124, Appl
119, Appl
119, Appl
  122, App
11047, A
15380, A
6, Appli
6, Appli
17733, A
  App
   RESULT 1
```

|            | 45                | 44              | 43                | 42                | 41                | 40                | 39               | 38               | 37                | 36                | ω                | <u>ب</u>          | 33                | 32               | 31                   | 30                   | 29                   | 28                |
|------------|-------------------|-----------------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|-------------------|-------------------|------------------|-------------------|-------------------|------------------|----------------------|----------------------|----------------------|-------------------|
|            | 50                | 50              | 50                | 50                | 50                | 50                | 50               | 50               | 50                | 50                | 50               | 50                | 50                | 50               | 50                   | 50.5                 | 50.5                 | 51                |
|            | 28.6              | 28.6            | 28.6              | 28.6              | 28.6              | 28.6              | 28.6             | 28.6             | 28.6              | 28.6              | 28.6             | 28.6              | 28.6              | 28.6             | 28.6                 | 28.9                 | 28.9                 | 29.1              |
|            | 548               | 548             | 548               | 548               | 548               | 548               | 548              | 548              | 548               | 548               | 548              | 548               | 548               | 548              | 410                  | 505                  | 252                  | 1596              |
|            | N                 | N               | N                 | N                 | N                 | N                 | N                | N                | N                 | N                 | N                | N                 | N                 | N                | N                    | N                    | N                    | N                 |
| ALIGNMENTS | US-09-895-752-4   | US-09-895-752-2 | US-09-887-586A-12 | US-09-887-586A-10 | US-09-887-586A-8  | US-09-887-586A-6  | US-09-887-586A-4 | US-09-887-586A-2 | US-09-398-395A-12 | US-09-398-395A-10 | US-09-398-395A-8 | US-09-398-395A-6  | US-09-398-395A-4  | US-09-398-395A-2 | US-09-248-796A-19654 | US-09-248-796A-14299 | US-09-248-796A-23055 | US-09-538-092-887 |
|            | sequence 4, Appii |                 | , 12              | Sequence 10, Appl | Sequence 8, Appli | Sequence 6, Appii | ۵,               | ٨                | Sequence 12, Appl | ,                 |                  | Sequence 6, Appii | Sequence 4, Appli |                  | , F                  |                      |                      |                   |

US-09-050-516-45 Sequence 4 Patent No. CLASSIFICATION:
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: 08/828
APPLICATION NUMBER: 08/828
PILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,44
REFERENCE/DOCKET NUMBER: 6 GENERAL INFORMATION FOR SEQ ID NO: APPLICANT: APPLICANT:
APPLICANT:
APPLICANT: OPERATING SYSTEM: DOS SOFTWARE: FastSEQ for Windows Version 2.0 CURRENT APPLICATION DATA: ZIP: 60064-3500 COMPUTER READABLE FORM: MEDIUM TYPE: Diskett APPLICANT: STROUPE, TITLE OF INVENTION: TELECOMMUNICATION INFORMATION: TELEPHONE: 847/935-1729 TELEPAX: 847/938-2623 CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park TITLE OF INVENTION: APPLICANT: APPLICANT: NUMBER OF SEQUENCES: APPLICANT: PPLICANT: COMPUTER: IBM CO
OPERATING SYSTEM:
SOFTWARE: FastSE APPLICATION NUMBER: FILING DATE: COUNTRY: ع 45, 10, 662741 10, 662741 INFORMATION: Application US/09050516 HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
NVENTION: REAGENTS AN USA COLPITTS, TRACEY L. FRIEDMAN, PAULA N. HAYDEN, MARK GRANADOS, BILLING-MEDEL, IBM Compatible Diskette JULIAN S, EDWARD N. TRACT FOR DETECTING DISEASES OF THE GASTROINTESTINAL 08/828,855 35,441 US/09/050,516 PATRICIA 6065.US.P1 AND METHODS USEFUL

SEQUENCE CHARACTERISTICS:

```
밁
   ঠ
  ; TOPOLOGY: 1:
; MOLECULE TYPE:
US-09-050-516-45
   RESULT 2
US-10-278-547-45
   Sequence 45, Application Patent No. 6660834
GENERAL INFORMATION:
   Query Match
Best Local (
  Matches
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 45:
SEQUENCE CHARACTERISTICS:
  COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette

COMPUTER: IBM Compatible

OPERATING SYSTEM: DOS

SOFTWARE: FastSEQ for Windows Version 2.0

CURRENT APPLICATION NUMBER: US/10/278,547

FILING DATE: 23-Oct-2002

CLASSIFICATION: «Unknown»
  Match 100.0%;
Local Similarity 100.0%;
les 35; Conservative 0
  TYPE: amino acid
STRANDEDNESS: sir
  NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 600
TELECOMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
  APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: <Unknown>
   APPLICANT: BILLING-MEDEL, PATRICIA
COHEN, MAURICE
   NUMBER OF SEQUENCES: 49
   TITLE OF
   1 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 35
TOPOLOGY: linear
:ULE TYPE: No. 6660834e
:NCE DESCRIPTION: SEQ ID NO: 45:
  TYPE: amino acid
STRANDEDNESS: single
   CITY: Abbott Park STATE: IL
  ADDRESSEE: Abbott Laboratories STREET: 100 Abbott Park Road
   ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
   TELEFAX: 847/938-2623
   ZIP: 60064-3500
  COUNTRY:
  LENGTH: 35 amino acids
   Application US/10278547
  35 amino acids
   KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
   linear
   COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
  GRANADOS,
   No. 6627414e
   single
  USA
  EDWARD N.
  0;
   Score 175; DB 2;
Pred. No. 8.8e-18;
  Mismatches
   6065.US.P1
  0;
  Length 35;
  Indels
  0,
  Gaps
  0
```

```
용
   Ś
  US-10-278-547-45
   US-09-050-516-47
   US-09-050-516-47
  RESULT 3
  Query Match
Best Local
  Patent No. 6627414
GENERAL INFORMATION:
  Sequence 47,
  Matches
               Query Match 100.0%; Score 175; Best Local Similarity 100.0%; Pred. No. 8
 Matches
  INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS LENGTH: 215 amino acid
  APPLICANT: STROUPE, TITLE OF INVENTION: TITLE OF INVENTION: TITLE OF INVENTION:
   APPLICANT:
APPLICANT:
APPLICANT:
   NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 600
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
   COMPUTER: IBM Compatible
ODERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/09/050,516
FILING DATE:
   ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/8:
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
  MOLECULE TYPE: No. 6627414e
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
  APPLICANT:
   APPLICANT
  APPLICANT
   APPLICANT:
  APPLICANT:
   APPLICANT:
  APPLICANT:
  TOPOLOGY:
  TYPE: amino acid
  CLASSIFICATION:
   STREET: 100 Abbott Park Road CITY: Abbott Park
   COUNTRY:
  STRANDEDNESS:
   TELEFAX: 847/938-2623
   1 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
   Similarity
   7, Application US/09050516
6627414
   ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS
   KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
   215 amino acids
   USA
Conservative
  COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
  Conservative
   GRANADOS,
   COHEN, MAURICE
   BILLING-MEDEL, PATRICIA
  HODGES, STEVEN C.
KLASS, MICHAEL R.
  linear
  single
  MARK
  TRACT
   STEPHEN D.
REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  100.0%; Score 175; DB 2;
100.0%; Pred. No. 8.8e-18;
  49
   EDWARD N.
  08/828,855
  LISA
 0
  6065.US.P1
   Mismatches
  Mismatches
             8.3e-17;
                               DB 2; Length 215;
  35
  35
  Length 35;
   Indels
  Indels
   0
  0
  Gaps
  0
   0
```

Ş

ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS

35

```
밁
   US-10-278-547-47
밁
                                 ঠ
   US-10-278-547-47
   Query Match
Best Local Similarity
Matches 35; Conserv
  CENERAL INFORMATION:
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
   CCASSIFICATION: COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
OPERATING SYSTEM: DOS
SOPTMARB: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
   KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   TOPOLOGY: linear
MOLECULE TYPE: No. 6660834e
SEQUENCE DESCRIPTION: SEQ ID NO: 47:
  NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEPAX: 847/938-2623
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
   ATTORNEY/AGENT INFORMATION:
   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   APPLICANT: BILLING-MEDEL, PATRICIA
   NUMBER OF SEQUENCES:
  47,
   104
104 ALPPEVESPTPDENSDONSRSSSOASGITGSYSVS 138
                             ALPPEVPSPTPDENSDQNSRSSSQASGITGSYSVS 35
   LENGTH: 215 amino acids TYPE: amino acid
  FILING DATE: <Unknown>
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
  STRANDEDNESS: single
  CITY: Abbott Park
  Application US/10278547
   Conservative
   60064-3500
   COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
  HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
   GRANADOS,
  COHEN, MAURICE
  USA
  100.0%; Score 175; DB 2; 100.0%; Pred. No. 8.3e-17;
   EDWARD N.
   0
   Mismatches
   Length 215;
   Indels
   ۰,
   Gaps
   0
```

RESULT 5

RESULT 6 US-10-278-547-42

Sequence 42, Applicati Patent No. 6660834 GENERAL INFORMATION:

Application US/10278547

APPLICANT: BILLING-MEDEL, PATRICIA COHEN, MAURICE

```
US-09-050-516-42
밁
                           Ś
  ; TOPOLOGY: linear
; MOLECULE TYPE: No. 6627414e
US-09-050-516-42
   Sequence 4
Patent No.
   Query Match
  Matches
  PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/828,85
PILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
   GENERAL INFORMATION:
   INFORMATION FOR SEQ ID NO:
   TITLE OF INVENTION: I
TITLE OF INVENTION: I
TITLE OF INVENTION: I
   APPLICANT:
APPLICANT:
   COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
  APPLICANT:
  SEQUENCE CHARACTERISTICS:
   APPLICANT
  APPLICANT
   APPLICANT:
  APPLICANT
   COUNTRY: USA
ZIP: 60064-3500
   STATE:
   Local Similarity
  TYPE: amino acid
STRANDEDNESS: sir
  CLASSIFICATION:
   FILING DATE
  TELEFAX:
  LENGTH:
568 ALPPEVESPTPDENSDONSRSSSOASGITGSYSVS 602
  42, Application US/09050516
o. 6627414
                             1 ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS
  35;
   Abbott Park
  H
  679 amino acide
  847/938-2623
   ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
  BILLING-MEDEL, PATRICIA
COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
CORPORT THE TANK
   HAYDEN, MARK
  GRANADOS,
   KRATOCHVIL, JON D.
   Conservative
   single
   S, STEVEN C.
  100.0%; Score 175; DB 2;
100.0%; Pred. No. 3.4e-16;
rative 0; Mismatches 0;
   JULIAN
  TRACT
  REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  49
  EDWARD N.
   08/828,855
   42:
  6065.US.P1
                                35
  Length 679;
   Indels
   <u>.</u>
   Gaps
```

```
밁
   á
  US-09-487-558B-422
   RESULT 7
   US-10-278-547-42
  Sequence 422, Application US/09487558B Patent No. 6949356 GENERAL INFORMATION:
  Query Match
   APPLICANT: Busby, Robert APPLICANT: Cali, Brian
   APPLICANT:
   APPLICANT:
   APPLICANT
                                      APPLICANT:
                     APPLICANT:
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 42:
   rocar
  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: «Unknown»
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
  TOPOLOGY: linear MOLECULE TYPE: No. 6660834e SEQUENCE DESCRIPTION: SEQ ID NO: 42:
  SEQUENCE CHARACTERISTICS:
   CURRENT APPLICATION DATA:
  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
  TELECOMMUNICATION INFORMATION:
  CORRESPONDENCE ADDRESS:
   NUMBER OF SEQUENCES:
   TITLE OF
   568
   1 ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS 35
  l Similarity
35; Conserv
   APPLICATION NUMBER: US/10/278,547 FILING DATE: 23-Oct-2002 CLASSIFICATION: <Unknown>
   Hecht, Peter
Holtzman, Doug
Madden, Kevin
   ALFPEVESPTPDENSDQNSRSSSQASGITGSYSVS
  STRANDEDNESS: single
   TYPE: amino acid
  NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
  SOFTWARE: FastSEQ for Windows Version 2.0
   COMPUTER: IBM Compatible OPERATING SYSTEM: DOS
   STATE: IL
  STREET: 100 Abbott Park Road CITY: Abbott Park
   LENGTH: 679 amino acids
  TELEFAX: 847/938-2623
   TELEPHONE: 847/935-1729
   ZIP: 60064-3500
  COUNTRY: USA
   ADDRESSEE: Abbott Laboratories
                 Maxon, Mary
Milne, Todd
   Madden,
No. 6949356man, Thea
   Cali, Brian
  100.0%; Score 175; DB 2; Larity 100.0%; Pred. No. 3.4e-16; Conservative 0; Mismatches 0;
  KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  GRANADOS,
   COLPITIS, TRACEY L. FRIEDMAN, PAULA N.
  S, STEVEN C.
MICHAEL R.
   JULIAN
  EDWARD N.
   6065.US.P1
   602
  Length 679;
  Indels
  0
  Gaps
  0,
```

```
뭉
  닭
   US-09-248-796A-15380
   ; ORGANISM: Human US-09-949-016-11047
  US-09-949-016-11047
  FILE REFERENCE: CL001307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR FILING DATE: 2000-10-20

PRIOR APPLICATION NUMBER: 60/237,768

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR APPLICATION NUMBER: 60/231,498

PRIOR FILING DATE: 2000-09-08
  ; ORGANISM: Saccharomyces cerevisiae US-09-487-558B-422
   Sequence 15380, Application US/09248796A
Patent No. 6747137
GENERAL INFORMATION:
APPLICANT: Keith Weinstock et al
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO CANDIDA ALBICANS
TITLE OF INVENTION: FOR DIAGNOSTICS AND THERAPEUTICS
   NUMBER OF SEQ ID NOS: 207012
SOPTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 11047
LENGTH: 1163
TYPE: PRT
  Sequence 11047, Application US/09949016
Patent No. 6812339
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
   APPLICANT: Summers, Eric
TITLE OF INVENTION: Methods for Improving Secondary Metabolite Production in Fungi
FILE REFERENCE: 109272.130
CURRENT APPLICATION NUMBER: US/09/487,558B
CURRENT FILING DATE: 2000-01-19
PRIOR APPLICATION NUMBER: US 60/487,558
RRIOR FILING DATE: 1999-10-20
NUMBER OF SEQ ID NOS: 446
SOFTWARE: Patentin version 3.0
SEQ ID NO 422
  Matches
  Query Match
   Matches
  Query Match
  APPLICANT:
APPLICANT:
APPLICANT:
  APPLICANT:
APPLICANT:
FILE REFERENCE: 107196.132
CURRENT APPLICATION NUMBER: US/09/248,796A
CURRENT FILING DATE: 1999-02-12
   APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
  TYPE: PRT
   Local Similarity
les 15; Conserv
   471 MYPVNQSNTPQKVPPARLSSSRNSHKNNSTTSLSSNITGSASIS 514
   408
   2 LFPEVFSPTPDE------NSDQNSRSSSQASGITGSYSVS 35
  14;
  661
  1 ALFPEVFSPTP-DENSDONSRSSSOASGITGSYS 33
  Similarity
   SIFEESSTPTTIDEYSDNNPSFTDDSSGDESSYS 441
  Sherman, Amir
Silva, Jeff
  Salama, Sofie
  Royer, John
  Conservative
   Conservative
   32.6%;
  31.1%;
   Score 57; DB:
Pred. No. 14;
9; Mismatches
   9;
  5
  Score 54.5;
Pred. No. 63;
  Mismatches
  DB 2;
   2;
  14;
   10;
  Length 661;
  Length 1163;
   Indels
   10;
  <u>بر</u>
  Gaps
   Gaps
  1:
   ۳,
```

SEQ ID NO 15380

ENGTH: 642

NUMBER OF SEQ ID NOS:

APPLICATION NUMBER: US 60/074,725 FILING DATE: 1998-02-13 APPLICATION NUMBER: US 60/096,409 FILING DATE: 1998-08-13

```
밁
  S
   ; ORGANISM: Candida albicans US-09-248-796A-15380
   밁
   ; ORGANISM: equine rhinovirus 1 US-09-091-219-6
   RESULT 11
   US-09-660-541-6
   Matches
  Best Local Similarity
  Sequence 6, Application US/09660541 Patent No. 6531136
   Matches
   SEQ ID NO 6
  sequence 6, Application US/09091219
Patent No. 6171592
  Query Match
   GENERAL INFORMATION:
  Query Match
   SENERAL INFORMATION:
   APPLICANT: FENG, L1
TITLE OF INVENTION: EQUINE RHINOVIRUS 1 PROTEINS
FILE REFERENCE: 040268/0151
CURRENT APPLICATION NUMBER: US/09/660,541
CURRENT FILING DATE: 2000-09-12
PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 09/091,219
PRIOR FILING DATE: EARLIER FILING DATE: 1998-10-05
PRIOR FILING DATE: EARLIER FILING DATE: 1995-12-18
NUMBER: OF SEQ ID NOS: 25
CONTRELED TO SERVICE PILING DATE: 1995-12-18
NUMBER OF SEQ ID NOS: 25
  EARLIER APPLICATION NUMBER: AU PN7201
EARLIER FILING DATE: 1995-12-18
NUMBER OF SEQ ID NOS: 25
SOFTWARE: Patentin Ver. 2.0
   TITLE OF INVENTION: EQUINE RHINOVIRUS 1 PROTEINS FILE REFERENCE: 040268/0151 CURRENT APPLICATION NUMBER: US/09/091,219 CURRENT FILING DATE: 1998-10-05 EARLIER APPLICATION NUMBER: PCT/AU96/00815 EARLIER FILING DATE: 1996-12-18
   APPLICANT: FENG,
   APPLICANT: STUDDERT, Michael J
  APPLICANT: STUDDERT, Michael J. APPLICANT: CRABB, Brendan S.
   LENGTH: 80
  Local
. NO 6
   441 FSPVIQEDSDSNSDSNSNSDG 461
   11,
   42
   12;
  6 VFSPTPDENSDQNSRSSSQASGITGSYS 33
   Similarity
  CRABB, b.
  PatentIn Ver.
  FSPTPDENSDONSRSSSOASG 27
  CRABB, b.
   VISPEGQGSNTSSSTSSSQSSGLGGWFS 69
   Conservative
   Conservative
  Brendan S.
  30.3%;
42.9%;
  30.9%;
  2
.
0
   ω
--
   6; Mismatches
  Score 54;
Pred. No.
  Score 53; DB 2;
Pred. No. 3.7;
   Mismatches
  DB 2;
   10;
  Length 80;
  Length 642;
   0
   0;
   Gaps
   0;
   0
```

```
RESULT 12
US-09-252-991A-17733
   밁
   Ś
   ; ORGANISM: equine rhinovirus 1 US-09-660-541-6
  밁
  Ś
   US-09-921-099A-17
  US-09-921-099A-17
   US-09-252-991A-17733
   Query Match
Best Local Similarity
Matches 12; Conserv
   SEQ ID NO 17733
LENGTH: 362
   Sequence 17733, Apparent No. 6551799
   SOFTWARE: PatentIn version 3.0
SEQ ID NO 17
LENGTH: 437
   Sequence 17, Application US/09921099A Patent No. 6602707
   Best Local
Matches 1
  Query Match
Matches
  GENERAL INFORMATION
   GENERAL INFORMATION:
  Patent No.
                           Query Match
   CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
  APPLICANT: MATC J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
   CURRENT APPLICATION NUMBER: US/09/921,099A CURRENT FILING DATE: 2001-08-01
   TITLE OF INVENTION: Mammalian DNA Binding Membrane-Associated Protein-encoding FILE REFERENCE: 00-617-A
  APPLICANT: Merkins, Louise
APPLICANT: Bennett, Robert
APPLICANT: Seiss, Donald
  NUMBER OF SEQ ID NOS:
  FILE REFERENCE:
   CURRENT FILING DATE: 2001-08-01
NUMBER OF SEQ ID NOS: 21
  APPLICANT: Hefeneider, Steven
  OTHER INFORMATION:
  FEATURE:
NAME/KEY: UNSURE
   ORGANISM: Pseudomonas aeruginosa
  TYPE: PRT
  TYPE: PRT
   ORGANISM: Drosophila melanogaster
   LOCATION:
Local Similarity
nes 11; Conserv
   42
  65
  4 PEVFSPTPDENSDQNSRSSSQASGITGSYSVS
  Similarity
  VISPEGQGSNTSSSTSSSQSSGLGGWFS
  VFSPTPDENSDQNSRSSSQASGITGSYS 33
  PRVFSAIEPENSPMLKRSLALAAGIALSLSAA 96
  Conservative
   Conservative
 Conservative
   Application US/09252991A
  107196.136
  Identity of amino acid at
   30.3%;
              30.3%;
  30.3%;
Pred. No. :
   ٠.
د
   Score 53; DB 2;
Pred. No. 3.7;
  Score 53; DB
Pred. No. 24;
  Mismatches
   Mismatches
  Mismatches
   69
                30;
                                  띪
  DB 2;
                                  ν
••
   the above locations
   10; Indels
  15;
   7;
   Length 80;
  Length 362;
                                  Length 437;
   Indels
  Indels
   <u>,</u>
   0
  0
   Gaps
    Gaps
   are unknown
   0
  0,
      0
   Gene
```

```
APPLICANT: CRABB, Brendan S.

APPLICANT: CRABB, Brendan S.

APPLICANT: FENG, Li

TITLE OF INVENTION: EQUINE RHINOVIRUS 1 PROTEINS
FILE REFERENCE: 040268/0151
CURRENT APPLICATION NUMBER: US/09/091,219
CURRENT FILLNG DATE: 1998-10-05
EARLIER APPLICATION NUMBER: PCT/AU96/00815
EARLIER APPLICATION NUMBER: PCT/AU96/00815
EARLIER FILING DATE: 1995-12-18
EARLIER FILING DATE: 1995-12-18
NUMBER OF SEO ID NOS: 25
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 25
LENGTH: 2232
TYPE: PRT
ORGANISM: equine rhinovirus 1
US-09-091-219-25
   GENERAL INFORMATION:
APPLICANT: STUDDERT, Michael J.
APPLICANT: CRABB, Brendan S.
APPLICANT: CRABB, Brendan S.
APPLICANT: PENG, Li
APPLICANT: PENG, Li
TITLE OF INVENTION: EQUINE RHINOVIRUS 1 PROTEINS
FILE REFERENCE: 040268/0151
CURRENT APPLICATION NUMBER: US/09/660,541
CURRENT FILING DATE: 2000-09-12
PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 09/091,219
PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 09/091,219
PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: AU PN7201
PRIOR FILING DATE: EARLIER FILING DATE: 1998-10-05
PRIOR FILING DATE: EARLIER FILING DATE: 1995-12-18
NUMBER OF SEQ ID NOS: 25
SOFTMARE: Patentin Ver. 2.0
   RESULT 14
US-09-091-219-25
Sequence 25, Application US/09091219
; Patent No. 6171592
; Patent No. 6171592
Search completed: March Job time: 4.86054 secs
   망
   ફ
  ; SEQ ID NO 25;
LENGTH: 2232;
TYPE: PRT;
ORGANISM: equine rhinovirus 1
US-09-660-541-25
  RESULT 15
US-09-660-541-25
  밁
   8
   밁
   ঠ
  Query Match 30.3%; Score 53; DB 2; Length 2232; Best Local Similarity 42.9%; Pred. No. 2.3e+02; Matches 12; Conservative 6; Mismatches 10; Indels
   Sequence 25, Application US/09660541 Patent No. 6531136
   Matches
  Query Match
Best Local S
  y Match 30.3%; Score 53; DB 2; Length 2232; Local Similarity 42.9%; Pred. No. 2.3e+02; hes 12; Conservative 6; Mismatches 10; Indels
  7 FSPTPDENSDQNSRSSSQASGITG 30
  249 VISPEGQGSNTSSSTSSSQSSGLGGWFS 276
   249 VISPEGOGSNTSSSTSSSOSSGLGGWFS 276
  6 VESPTPDENSDQNSRSSSQASGITGSYS 33
   6 VFSPTPDENSDQNSRSSSQASGITGSYS 33
                      u,
                         2006, 13:38:53
  0;
   0
  Gaps
   Gaps
   0
   0,
```

```
Result
No.
   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
  Minimum DB seq length: 0
Maximum DB seq length: 200000000
   Scoring table:
  Title:
Perfect score:
  Run on:
  OM protein -
  Database
   Sequence:
   Total number of hits satisfying chosen parameters:
  Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
protein search, using sw model
   %
Query
Match Length DB
  1867569 segs, 417829326 residues
  BLOSUM62
Gapop 10.0 , Gapext 0.5
  US-10-646-873-45
175
  March 3, 2006, 14:09:14; Search time 15.3741 Seconds (without alignments) 951.209 Million cell updates/sec
  100.0
  100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
1100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.
  ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 35
  GenCore version 5.1.7 Copyright (c) 1993 - 2006 Biocceleration Ltd
US-09-050-516-42
US-10-278-547-42
US-10-278-547-42
US-10-426-873-42
US-10-424-599-219343
US-11-0477-143-4251
US-10-437-963-127884
US-10-437-963-127884
US-10-437-963-187082
US-10-108-260A-2762
US-10-108-260A-2762
US-10-108-260A-2762
US-10-437-963-1768
US-10-437-963-1768
US-10-408-765A-1768
US-10-408-765A-1768
US-10-408-765A-1768
US-10-497-963-203995
US-10-450-763-35175
  US-10-106-698-4761
US-09-050-516-47
US-10-278-547-47
US-10-646-873-47
  SUMMARIES
  1867569
  Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
  Description
                         Sequence
Sequence
  Sequence
Sequence
Sequence
Sequence
Sequence
   Sequence
Sequence
Sequence
Sequence
   e 45, Appl
e 45, Appl
e 476, Appl
e 476, Appl
e 47, Appl
e 47, Appl
e 47, Appl
e 42, Appl
e 219943,
e 31734, A
   127884,
45324, App
45324, A
187082,
127082, Ap
2762, Ap
2762, Ap
7425, Ap
7425, Ap
7468, Ap
1768, Ap
1768, Ap
   RESULT 1
         INFORMATION FOR SEQ ID NO:
```

| ť | Д                   | 44                | 43                | 42                   | 41                 | 40                   | 39                   | 38                   | 37                  | 36                   | 35                  | 34                   | 33                  | 32                  | 31                 | 30.              | 29                   | 28                   |
|---|---------------------|-------------------|-------------------|----------------------|--------------------|----------------------|----------------------|----------------------|---------------------|----------------------|---------------------|----------------------|---------------------|---------------------|--------------------|------------------|----------------------|----------------------|
| ļ | л<br>S              | 52                | 52                | 52                   | 52                 | 52                   | 52                   | 52                   | 52                  | 52                   | 52                  | 52                   | 52                  | 52.5                | 53                 | 53               | 53                   | 53.5                 |
|   | 29 7                | 29.7              | 29.7              | 29.7                 | 29.7               | 29.7                 | 29.7                 | 29.7                 | 29.7                | 29.7                 | 29.7                | 29.7                 | 29.7                | 30.0                | 30.3               |                  | 30.3                 | 30.6                 |
| , | 298                 | 297               | 275               | 252                  | 250                | 233                  | 185                  | 173                  | 163                 | 109                  | 93                  | 62                   | 46                  | 213                 | 448                | 437              | 300                  | 701                  |
| , | л                   | σ                 | u                 | 4.                   | w                  | 4                    | 4.                   | 4                    | 4                   | 4                    | 4                   | 4.                   | ហ                   | σ                   | σ                  | υ                | 44                   | 4.                   |
|   | US-10-450-763-53184 | US-10-220-335-639 | US-10-220-335-295 | US-10-437-963-141437 | US-09-978-360A-473 | US-10-425-115-204469 | US-10-424-599-242244 | US-10-437-963-115260 | US-10-425-114-71060 | US-10-425-115-332428 | US-10-767-701-32997 | US-10-424-599-254465 | US-10-450-763-53181 | US-11-097-143-35148 | US-11-097-143-2595 | US-10-619-992-17 | US-10-437-963-150328 | US-10-282-122A-62129 |
|   |                     |                   |                   |                      | •                  |                      |                      |                      |                     |                      |                     |                      |                     |                     |                    |                  |                      |                      |
| • | Sequence            | Sequence          | Sequence          | Sequence             | Sequence           | Sequence             | Sequence             | Sequence             | Sequence            | Sequence             | Sequence            | sequence             | Sequence            | Sequence            | Sequence           | Sequence         | Sequence             | Sequence             |
| , | 53184, A            | 639, App          |                   | 141437,              | 473, App           | 204469,              | 242244,              | 115260,              | 71060, A            |                      | 3299/, A            | 204460,              | DULBL, A            | •                   | 7110 Y             | ŕ                | 150328,              | 62129, A             |

ALIGNMENTS

| US-09-050-516-45                           |
|--------------------------------------------|
| Sequence 45, Application US/09050516       |
| g                                          |
| ADDITICANT - BILING-MEDRI - PATRICIA       |
|                                            |
| : COLPIT                                   |
| : FRIEDMAN,                                |
| GORDON, JULIAN                             |
| GRANADO                                    |
| : HAYDEN, MARK                             |
| : HODGES, STEVEN                           |
| : KLASS, MICHAEL                           |
| : KRATOCHVIL, J                            |
| ROBERTS-R                                  |
| RUSSELL, JOHN C.                           |
| T: STROUPE, STEPHEN D.                     |
| ŞÇ                                         |
|                                            |
| R OF SEQUENCES:                            |
| ğ                                          |
| EE: Abbott I                               |
| SIRBBI: 100 AUDUCC FAIR NORG               |
| IL                                         |
| ĸ                                          |
| ZIP: 60064-3500                            |
| 8                                          |
| ВВ                                         |
| CACLEW.                                    |
| OFERMALING SIGLEM: FOR Windows Version 2.0 |
| LICATION DATA:                             |
| APPLICATION NUMBER: US/09/050,516          |
| FILING DATE:                               |
|                                            |
| PRIOR APPLICATION DATA:                    |
| BILITY NOTE: 31-MAR-1997                   |
| AGENT :                                    |
| ~                                          |
| 井                                          |
| REFERENCE/DOCKET NUMBER: 6065.US.P1        |
| TELECOMMUNICATION INFORMATION:             |
| 12                                         |
| TELEFAX: 847/938-2623                      |
| TRUBX:                                     |

45:

SEQUENCE CHARACTERISTICS:

LENGTH: 35 amino acids
TYPE: amino acid
STRANDEDNESS: single

```
RESULT 2
US-10-278-547-45
   밁
   S
   US-09-050-516-45
   Sequence 45, Application No. US2003
GENERAL INFORMATION:
APPLICANT: BILL
   Matches 35; Conservative
   Best Local Similarity
   Query Match
   INFORMATION FOR SEQ ID NO: 45:
SEQUENCE CHARACTERISTICS:
LENGTH: 35 amino acids
TYPE: amino acid
   MOLECULE TYPE:
   PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/09/050,516

FILING DATE: «Uhknown»
APPLICATION NUMBER: 08/828,855

FILING DATE: 31-MAR-1997

ATTORNEY/AGENT INFORMATION:

NAME: Becker, Chery1 L.

REGISTRATION NUMBER: 35,441

REGISTRATION NUMBER: 6665.US.P1

TELEPHONE: 847/935-1729

TELEPHONE: 847/935-1729
   TOPOLOGY:
TOPOLOGY: linear MOLECULE TYPE: No. US20030082619Ale SEQUENCE DESCRIPTION: SEQ ID NO: 45:
  KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  CURRENT APPLICATION DATA:
  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
  NUMBER OF SEQUENCES: 49 CORRESPONDENCE ADDRESS:
   1 ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS 35
   APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
  COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
  STREET: 100 Abbott Park Road CITY: Abbott Park
   ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS 35
   STRANDEDNESS: single
  COUNTRY: USA
  STATE: IL
   TELEX: <Unknown>
  ZIP: 60064-3500
  ADDRESSEE: Abbott Laboratories
   TELEFAX: 847/938-2623
   Application US/10278547
lo. US20030082619A1
   linear
E: No. US20010010904Ale
   BILLING-MEDEL, PATRICIA COHEN, MAURICE
  HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
   COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
  GRANADOS, EDWARD N.
   100.0%;
   0;
   Score 175; DB 3; Pred. No. 2.5e-16;
   Mismatches
   6065.US.P1
   0;
   Length 35;
   Indels
   0
   Gaps
   0
```

```
TOPOLOGY: linear;

MOLECULE TYPE: No. US20040043406Ale
SEQUENCE DESCRIPTION: SEQ ID NO: 45:
US-10-646-873-45
   US-10-646-873-45
Sequence 45, Application US/10646873
Diblication No. US20040043406A1
GENERAL INFORMATION:
  밁
  S
   RESULT 3
   US-10-278-547-45
Query Match 100.0%; Score 175; DB 4; Best Local Similarity 100.0%; Pred. No. 2.5e-16; Matches 35; Conservative 0; Mismatches 0;
  Query Match
  TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 45:
SEQUENCE CHARACTERISTICS:
   GRANALOGIA
HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
KRATOCHVIL, JON D.
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
TRACT
  APPLICATION NUMBER: US/09/050,516
FILING DATE: 30-MAR-1998
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REGERENCE/DOCKET NUMBER: 6665.US.P1
TELEPHONE: 847/935-1729
TELEPHONE: 847/935-1729
  Local
  OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
   CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
   APPLICANT: BILLING-MEDEL, PATRICIA
  l Similarity
35; Conserv
  1 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
   LENGTH: 35 amino acids
TYPE: amino acid
STRANDEDNESS: single
   STATE: IL
COUNTRY: USA
  ALFPEVESPTPDENSDONSRSSSOASGITGSYSVS 35
  APPLICATION NUMBER: US/10/646,873 FILING DATE: 22-Aug-2003
   CITY: Abbott Park
  TELEFAX: 847/938-2623
  100.0%; Score 175; DB 4; llarity 100.0%; Pred. No. 2.5e-16; Conservative 0; Mismatches 0;
   60064-3500
  FRIEDMAN, PAULA N.
   COLPITTS, TRAC
   TRACEY L.
  35
                                       Length 35;
  Length 35;
  Indels
  0; Gaps
  0
```

Indels

0;

Gaps

0

```
S
   RESULT 4
US-10-106-698-4761
  밁
  문
   US-10-106-698-4761
  JS-09-050-516-47
   SEQ ID NO 4761
  Matches
   Query Match
  Publication No. US20
  CURRENT APPLICATION NUMBER: US/10/106,698
CURRENT FILING DATE: 2002-03-27
PRIOR APPLICATION NUMBER: PCT/US00/26524
   PRIOR APPLICATION NUMBER: US 60/163,280
PRIOR FILING DATE: 1999-11-03
NUMBER OF SEQ ID NOS: 8564
  APPLICANT: Ruben et al.
TITLE OF INVENTION: Colon and Colon Cancer Associated Polynucleotides and Polypeptide
FILE REFERENCE: PA005P1
   PRIOR APPLICATION NUMBER: US 60/157,137
   PRIOR FILING DATE: 2000-09-28
  PRIOR FILING DATE: 1999-09-29
   guence 47,
  OTHER INFORMATION: Xea equals any of the naturally occurring L-amino acids NAME/KEY: MISC FEATURE LOCATION: (116)
   OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
  ORGANISM: Homo sapiens
  APPLICANT:
  APPLICANT:
   APPLICANT
   APPLICANT
   PPLICANT:
   PPLICANT:
   PPLICANT
  PPLICANT
  PPLICANT:
   Local
  STREET:
                               CITY: Abbott Park
  ADDRESSEE:
  ŏ.
  4761, Application US/10106698
lon No. US20030109690A1
  61 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
  1 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 35
  PatentIn Ver.
  7, Application US/09050516
US20010010904A1
   Similarity
  ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
   BILLING-MEDEL, PATRICIA COHEN, MAURICE COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
   100 Abbott Park Road
  Conservative
   ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
  GRANADOS,
  Abbott Laboratories
   ADDRESS:
   S, STEVEN C.
MICHAEL R.
  CHVIL, JON D.
   100.0%; Score 175; DB 4; 100.0%; Pred. No. 1.6e-15;
   MARK
  TRACT
  STEPHEN D
   REAGENTS AND METHODS US
FOR DETECTING DISEASES
   49
  EDWARD N.
  0
  AND METHODS USEFUL
CTING DISEASES OF THE GASTROINTESTINAL
  Mismatches
   36
   Length 172;
  Indels
  0
   밁
   US-10-278-547-47
   RESULT 6
  US-09-050-516-47
   Sequence 47, Appropriate Publication No.
   Matches
  Query Match
Best Local Similarity
  INFORMATION FOR SEQ ID NO:
   GENERAL
  REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
TELECOMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEPAX: 847/938-2623
   PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/E
PILING DATE: 31-MAR-1997
   COMPUTER READAR
  TOPOLOGY: 11
   SEQUENCE CHARACTERISTICS
LENGTH: 215 amino aci
   FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
   SOFTWARE: FastSEQ for Windows Version 2.0 CURRENT APPLICATION DATA:
  COMPUTER: IBM Con
OPERATING SYSTEM:
SOFTWARE: FastSEC
   FILING DATE:
CLASSIFICATION:
  STRANDEDNESS:
  APPLICATION NUMBER: US/09/050,516
                                   OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version
CURRENT APPLICATION DATA:
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
  TITLE OF INVENTION: REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF T
  NUMBER OF SEQUENCES:
   104 ALFPEVESPTPDENSDONSRSSSOASGITGSYSVS
   35;
  1 ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS 35
  60064-3500
R READABLE FORM:
  Becker,
  amino acid
  COMPUTER: IBM Compatible
  ZIP: 60064-3500
  CITY: Abbott Park
  Application US/10278547
   215 amino acids
   Conservative
   linear
   IBM Compatible
   US20030082619A1
CATION NUMBER: US/10/278,547 NG DATE: 23-Oct-2002
   BILLING-MEDEL, PATRICIA
COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
   Diskette
   HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
  No. US20010010904Ale
   GRANADOS,
  single
  Chery1
   USA
  100.0%;
  08/828,855
  JULIAN
  MARK
  STEVEN C.
   TRACT
  49
   EDWARD N.
   0
   6065.US.P1
  Score 175; DB 3;
Pred. No. 2.1e-15;
   Mismatches
  Length 215;
   THE GASTROINTESTINAL
```

0

Gaps

<u>,</u>

```
밁
   ঠ
  US-10-646-873-47
  RESULT 7
  US-10-278-547-47
   Best Loc
Matches
  Sequence 47, Application US/10646873 Publication No. US20040043406A1 GENERAL INFORMATION:
  Query Match
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
  COUNTRY: USA
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/646,873
FILING DATE: 22-Aug-2003
CLASSIFICATION: «Unknown»
PRIOR APPLICATION DATA:
   Local Similarity
nes 35; Conserv
  HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
   TOPOLOGY: linear MOLECULE TYPE: No. US20030082619A1e SEQUENCE DESCRIPTION: SEQ ID NO: 47:
  NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 600
TELECOMMUNICATION INFORMATION:
  CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
   ATTORNEY/AGENT INFORMATION:
   NUMBER OF SEQUENCES: 49
  APPLICANT: BILLING-MEDEL, PATRICIA
   PRIOR
   104 ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS 138
  1 ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS 35
   R APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: <UNKNOWN>
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-WAR-1997
APPLICATION NUMBER: US/09/050,516
FILING DATE: 30-MAR-1998
APPLICATION NUMBER: 08/828,885
FILING DATE: 31-MAR-1997
   CITY: Abbott Park
  STRANDEDNESS: single
   TYPE: amino acids
   CLASSIFICATION: <Unknown>
  TELEFAX: 847/938-2623
   TELEPHONE: 847/935-1729
   100.0%; Score 175; DB 4; larity 100.0%; Pred. No. 2.1e-15; Conservative 0; Mismatches 0;
   COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
  GRANADOS,
   MARK
  FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  EDWARD N.
   6065.US.P1
  Length 215;
   Indels
   0
   Gaps
   0
```

```
TOPOLOGY: 1 near

HOLECULE TYPE: NO. US20040043406Ale
SEQUENCE DESCRIPTION: SEQ ID NO: 47:
US-10-646-873-47
   밁
  US-09-050-516-42
   Matches
  Patent No.
  Query Match
Best Local Similarity
  GENERAL INFORMATION:
APPLICANT: BILLIN
  CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/826
APPLICATION NUMBER: 08/826
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
   TITLE OF INVENTION: ITTILE OF INVENTION: ITTILE OF INVENTION: THE OF SEQUENCES:
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 47:
  SOFTWARE: FASTERY DOS
SOFTWARE: FASTERQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050 517
FILING DATE.
   COUNTRY: USA
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   APPLICANT:
   APPLICANT
APPLICANT
   APPLICANT:
APPLICANT:
   APPLICANT:
APPLICANT:
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
  APPLICANT:
TELECOMMUNICATION INFORMATION:
   APPLICANT
   APPLICANT:
  APPLICANT
                REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
   CITY: Abbott Park
  STREET:
  ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 600
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
  SEQUENCE CHARACTERISTICS:
   104 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 138
  1 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 35
  US20010010904A1
  LENGTH: 215 amino acids
TYPE: amino acid
STRANDEDNESS: single
   Application US/09050516
   TELEFAX: 847/938-2623
  100 Abbott
  ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
   COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
   HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
   Conservative
  GRANADOS,
   COHEN, MAURICE
  BILLING-MEDEL, PATRICIA
   MARK
  100.0%; Score 175; DB 4; 100.0%; Pred. No. 2.1e-15;
   TRACT
  REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  49
  Park Road
  EDWARD N.
   08/828,855
   <u>.</u>
                  6065.US.P1
   Mismatches
  6065.US.P1
   Length 215;
   Indels
   <u>,</u>
```

0;

847/935-1729

0

```
밁
   Ś
   US-10-278-547-42
  Best Loca
Matches
  Sequence 42, Appropriate Publication No.
   Query Match
   INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 679 amino acid
TELEX: «Unknown»
INFORMATION FOR SEQ ID NO: 42:
SEQUENCE CHARACTERISTICS:
LENGTH: 679 amino acids
  TOPOLOGY: linear MOLECULE TYPE: No. US20010010904Ale
  Local Similarity
nes 35; Conserv
   TELEPHONE:
  STRANDEDNESS:
   TYPE: amino acid
   HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
KR
  COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOPTMARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
   NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REPERSUCE DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
   APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
  NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
  PRIOR APPLICATION DATA:
  568 ALFPEVPSPTPDENSDONSRSSSOASGITGSYSVS 602
   1 ALFPEVESPTPDENSDONSRSSSOASGITGSYSVS 35
   APPLICATION NUMBER: US/09/050,516 PILING DATE: <Unknown>
   APPLICATION NUMBER: US/10/278,547 FILING DATE: 23-Oct-2002
  CLASSIFICATION: <Unknown>
   ZIP: 60064-3500
  COUNTRY: USA
   CITY: Abbott Park
  Application US/10278547
No. US20030082619A1
  ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
   679 amino acide
  ELEFAX: 847/938-2623
  847/938-2623
  Conservative
   BILLING-MEDEL, PATRICIA COHEN, MAURICE
   GRANADOS, EDWARD N.
  COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
  single
  100.0%; Score 175; DB 3;
100.0%; Pred. No. 8.1e-15;
tive 0; Mismatches 0;
  , JULIAN
   42:
  Length 679;
   Indels
   Gaps
   0
```

```
RESULT 10
US-10-646-873-42
  밁
US-10-646-873-42
  Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 35; Conservative 0
   Sequence 42, Application US/106 Publication No. US20040043406A1
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 42:
SEQUENCE CHARACTERISTICS:
  COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/646,873
FILING DATE: 22-Aug-2003
CLASSIFICATION: <UNKnown>
PRIOR APPLICATION NUMBER: US/09/050,516
APPLICATION NUMBER: US/09/050,516
FILING DATE: 30-MAR-1998
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REGISTRATION NUMBER: 35,441
REGISTRATION NUMBER: 3666
  STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: No. US20030082619Ale
SEQUENCE DESCRIPTION: SEQ ID NO: 42:
  HODGES, STEVEN C.

KLASS, MICHAEL R.

KRANOCHVII, JON D.

TITLE OF INVENTION: REAGENTS AND METHODS USEFUL

FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
   REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
              STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: No. US20040043406Ale
SEQUENCE DESCRIPTION: SEQ ID NO: 42:
  NUMBER OF SEQUENCES:
  568 ALFPEVESPTPDENSDONSRSSSOASGITGSYSVS 602
   1 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 35
  LENGTH: 679 amino acids TYPE: amino acid
   TELEPHONE: 847/935-1729
   TELEFAX: 847/938-2623
   Application US/10646873
  BILLING-MEDEL, PATRICIA COHEN, MAURICE
  FRIEDMAN, PAULA N.
   GRANADOS,
   GORDON, JULIAN
   MARK
   EDWARD N.
   Score 175; DB 4;
Pred. No. 8.1e-15;
); Mismatches 0;
   Length 679;
  Indels
  <u>,</u>
  Gaps
```

```
▶ ₽
  ş
   문
  S
   밁
  US-10-425-114-37734
  US-10-424-599-219343
  US-10-424-599-219343
   RESULT 11
  RESULT 12
  Query Match
Best Local S
Matches 11
   TYPE: PRT
ORGANISM: Glycine max
FEATURE:
FEATURE:
OTHER INFORMATION: Clone ID: 701139073_FLI.pep
5-10-425-114-37734
  CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 73128
SEQ ID NO 37734
  NUMBER OF SEQ ID NOS: 285684
SEQ ID NO 219343
   Sequence 219343, Application US/10424599 Publication No. US20040031072A1 GENERAL INFORMATION:
   GENERAL INFORMATION:
   Query Match 36.0%;
Best Local Similarity 47.8%;
   Matches
  Query Match
  Matches
  Sequence 37734, Application US/10425114
Publication No. US20040034888A1
  APPLICANT: La ROSa Thomas J
APPLICANT: Kovallc David K
APPLICANT: Zhou Yihua
APPLICANT: Zhou Yihua
APPLICANT: Cao Yongwei
TITLE OF INVENTION: Soy Nucleic Acid Molecules and Other Molecules Associated
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(5323)B
CURRENT APPLICATION NUMBER: US/10/424,599
CURRENT FILING DATE: 2003-04-28
  APPLICANT: Kovalic, David K.
APPLICANT: Screen, Steven E
APPLICANT: Tabaska, Jack E
APPLICANT: Tabaska, Jack E
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILB REFERENCE: 38-21(53313)B
   APPLICANT: Liu, Jingdong APPLICANT: Zhou, Yihua
   LENGTH: 300
TYPE: PRT
ORGANISM: Glycine max
  FEATURE: OTHER INFORMATION: Clone ID: PAT_MRT3847_40092C.1.pep
  ENGTH: 329
   Local
   568 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 602
         135
   106 PHPDHNNNSNSHSSSESSSLTAA 128
  11;
  1 ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS 35
   35
'
  9 PTPDENSDQNSRSSSQASGITGS 31
   9
   Similarity
   Similarity
         PHPDHNNNSNSHSSESSSLTAA 157
  PTPDENSDQNSRSSSQASGITGS 31
  Conservative
  Conservative
  Conservative
   100.0%;
   36.0%;
  Score 63; DB 4; Pred. No. 4.5; 6; Mismatches
   0
  Score 63; DB Pred. No. 5; 6; Mismatches
  Score 175; DB 4;
Pred. No. 8.1e-15;
D; Mismatches 0;
  DB 4; Length 300;
  DB 4;
  6
  6; Indels
  Length 329;
  Length 679;
  Indels
   Indels
   0
  0,
  0,
  Gaps
  Gaps
   Gaps
  0
  0
   0
   With
```

```
RESULT 13
US-11-097-143-42681
  뭉
   ঠ
   CURRENT APPLICATION NUMBER: US/11/097,143
CURRENT FILING DATE: 2005-04-04
PRIOR APPLICATION NUMBER: 60/157,832
PRIOR APPLICATION NUMBER: 60/157,832
PRIOR APPLICATION NUMBER: 60/160,191
PRIOR APPLICATION NUMBER: 60/160,191
PRIOR PILING DATE: 1999-10-19
PRIOR PILING DATE: 1999-10-28
PRIOR PILING DATE: 1999-10-28
PRIOR PILING DATE: 1999-11-28
PRIOR APPLICATION NUMBER: 60/164,769
PRIOR APPLICATION NUMBER: 60/173,383
PRIOR APPLICATION NUMBER: 60/173,383
PRIOR PILING DATE: 1999-11-28
PRIOR PILING DATE: 1999-11-28
PRIOR APPLICATION NUMBER: 60/175,693
PRIOR PILING DATE: 2000-01-12
PRIOR APPLICATION NUMBER: 60/184,831
PRIOR APPLICATION NUMBER: 60/191,637
PRIOR PILING DATE: 2000-02-24
PRIOR PILING DATE: 2000-03-23
PRIOR FILING DATE: 2000-03-23
PRIOR FILING DATE: 2000-03-23
  US-11-097-143-42681
   US-10-437-963-127884
   APPLICANT: Barbazuk, Brad
APPLICANT: Li, Ping
TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(53221)B
CURRENT APPLICATION NUMBER: US/10/437,963
CURRENT FILING DATE: 2003-05-14
NUMBER OF SEQ ID NOS: 204966
SEQ ID NO 127884
LENGTH: 285
   Sequence 42681, Application US/11097143 Publication No. US20050208558A1 GENERAL INFORMATION:
   GENERAL INFORMATION:
APPLICANT: La Rosa, Thomas J.
APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
   NUMBER OF SEQ ID NOS: 43008
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 42681
LENGTH: 1406
   Sequence 127884, Application US/10437963 Publication No. US20040123343A1
   Matches
  Query Match
   APPLICANT:
   APPLICANT: Venter, J. Craig
APPLICANT: et al.
TITLE OF INVENTION: DETECTION KIT, SUCH AS NUCLEIC ACID
TITLE OF INVENTION: ARRAYS, FOR DETECTING EXPRESSION OF 10,000 OR MORE
TITLE OF INVENTION: DROSOPHILA GENES.
FILE REFERENCE: CL000728
   APPLICANT:
                         ORGANISM: Oryza sativa FEATURE:
   ORGANISM: DROSOPHILA
OTHER INFORMATION: Clone ID: PAT_MRT4530_30291C.1.pep
  Local Similarity
les 13; Conserv
  4 PEVFSPTPDENSDQNSRSSSQ--ASGIT 29
   Zhou, ri...
  Cao,
Wei
   PAAGSSSPSONOENNSNSSSOSGASGVS 986
  Boukharov, Andrey A.
   Conservative
   33.1%;
  Ç,
  Score 58; DB 6;
Pred. No. 1.3e+02;
   Mismatches
  Length 1406;
   Indels
   2
   Gaps
   ۲.
```

```
GENERAL INFORMATION:
APPLICANT: Busby, Robert
APPLICANT: Cali, Brian
APPLICANT: Cali, Peter
APPLICANT: Holtzman, Doug
APPLICANT: Holtzman, Doug
APPLICANT: Madden, Kevin
APPLICANT: Madden, Kevin
APPLICANT: Madden, Kevin
APPLICANT: Macon, Mary
APPLICANT: Milne, Todd
APPLICANT: Salama, Sofie
APPLICANT: Salama, Sofie
APPLICANT: Salama, Amir
APPLICANT: Salama, Amir
APPLICANT: Slow, Merhods for Improving Secondary Metabolite Production in Fungi
TITLE OF INVENTION: Methods for Improving Secondary Metabolite Production in Fungi
TITLE OF INVENTION: Methods for Improving Secondary Metabolite Production in Fungi
TITLE REPERENCE: 109272.147
FILLE REPERENCE: 109272.147
FILER REP
  RESULT 15
US-09-801-368-422
  밁
  밁
  ঠ
   US-10-437-963-127884
Search completed: March 3, 2006, 14:18:10 Job time: 15.3741 secs
  Query Match 32.6%; Score 57; DB 4; Length 285; Best Local Similarity 45.8%; Pred. No. 28; Matches 11; Conservative 4; Mismatches 9; Indels
   Query Match 32.6%; Score 57; DB 3; Length 661; Best Local Similarity 34.1%; Pred. No. 74; Matches 15; Conservative 9; Mismatches 10; Indels
   Sequence 422, Application US/09801368 Patent No. US20020128250A1
  162 YVPTPEEEIBSNGIASSWAGGING 185
  471 MYPVNQSNTPQKVPPARLSSSRNSHKNNSTTSLSSNITGSASIS 514
   7 FSPTPDENSDQNSRSSSQASGITG 30
  2 LFPEVFSPTPDE------NSDQNSRSSSQASGITGSYSVS 35
  10;
  0;
  Gaps
  Gaps
   0;
  -
```

Cocent works and said

```
Result
No.
   Minimum DB
Maximum DB
  Run on:
  OM protein -
  Post-processing: Minimum Match 0%
  Scoring table:
   Sequence:
   Database
   Total number of hits satisfying chosen parameters:
   Perfect score:
113
114
115
116
117
118
119
119
119
123
123
   Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
  Score
  51.5
   49.5
  54.5
  seq length: 0
seq length: 2000000000
   protein search, using sw model
   BLOSUM62
Gapop 10.0 , Gapext 0.5
   135346 seqs, 20000420 residues
  US-10-646-873-45
175
  March
   Match
  Maximum Match 100%
Listing first 45 summaries
  ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 35
   GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd
   Length DB
  3, 2006, 14:10:51 ;
                           266
227
227
361
361
361
377
395
595
742
742
742
742
742
742
742
742
742
  6/ptodata/1/pubpaa/US60_NEW_PUB.pep:*
   US-11-075-646-6

US-09-978-360A-473

US-11-087-099-1355

US-11-054-515-3229

US-10-991-285-872

US-11-072-512-2709

US-10-995-561-612

US-11-130-206-6
  US-10-517-939-274
US-10-995-561-614
US-10-995-561-616
US-10-995-561-610
US-10-995-561-610
US-10-995-561-617
US-11-130-206-4
US-11-130-206-2
US-10-995-561-615
   US-10-995-561-618
US-11-169-041-184
  SUMMARIES
   Search time 1.66667 Seconds (without alignments) 420.009 Million cell updates/sec
                                     Sequence 6, Appli
Sequence 473, App
Sequence 1355, App
Sequence 3229, Ap
Sequence 2709, Ap
Sequence 612, App
Sequence 614, App
Sequence 617, App
Sequence 610, App
Sequence 610, App
Sequence 617, App
Sequence 617, App
Sequence 618, App
Sequence 176, App
  Description
                            Sequence
  밁
   RESULT 1
US-11-075-646-6
  S
   GENERAL INFORMATION:
APPLICANT: Czech, Michael P.
APPLICANT: Powelka, Aimee
APPLICANT: Guilherme, Addison L.
APPLICANT: Cherniack, Andrew D.
TITLE OF INVENTION: RIP140 REGULATION OF DIABETES
   Sequence 6, Application US/11075646 Publication No. US20050261223A1
  CURRENT APPLICATION NUMBER: US/11/075,646
CURRENT FILING DATE: 2005-03-07
  FILE REFERENCE: 17738-009001
```

| 4.5                | 44               | <u>ئ</u>           | 42                 | 41                 | 40               | 39                | 38                | 37              | 36              | 35              | 34                | မှ                 | 32                 | 31                  | 30                | 29                | 28    | 27              | 26                |
|--------------------|------------------|--------------------|--------------------|--------------------|------------------|-------------------|-------------------|-----------------|-----------------|-----------------|-------------------|--------------------|--------------------|---------------------|-------------------|-------------------|-------|-----------------|-------------------|
| 45.5               | 45.5             | 45.5               | 45.5               | 45.5               | 46               | 46                | 46.5              | 46.5            | 47              | 47              | 47                | 47                 | 47                 | 47                  | 47                | 47                | 47    | 47.5            | 48                |
| 26.0               | 26.0             | 26.0               | 26.0               | 26.0               | 26.3             | 26.3              | 26.6              | 26.6            | 26.9            | 26.9            | 26.9              | 26.9               | 26.9               | 26.9                | 26.9              | 26.9              | 26.9  | 27.1            | 27.4              |
| 880                | 769              | 588                | 581                | 421                | 7102             | 467               | 964               | 159             | 1717            | 1717            | 1045              | 869                | 698                | 646                 | 380               | 296               | 133   | 1161            | 877               |
| 7                  | 7                | 7                  | 7                  | 7                  | 7                | 0                 | 7                 | 7               | 7               | 7               | 7                 | 7                  | 7                  | 7                   | 7                 | σ                 | σ     | 7               | σ                 |
| US-11-072-512-2834 | US-11-188-743-15 | US-11-072-512-3053 | US-11-072-512-2804 | US-11-087-099-6078 | US-11-143-980-48 | US-10-517-939-304 | US-11-089-551A-30 | US-11-038-676-4 | US-11-193-715-2 | US-11-192-967-2 | US-11-055-822-100 | US-11-087-099-9341 | US-11-087-099-8952 | US-11-087-099-10725 | US-11-024-959-339 | US-10-714-887-226 | -10-7 | US-11-075-646-8 | US-10-485-517-200 |
| Sequence 2834,     | Sequence 15,     | Sequence 3053      | Sequence 2804,     |                    |                  |                   | Sequence 30,      | Sequence 4,     | Sequence 2,     | Sequence 2,     | , 1               | Sequence 9341      | Sequence 8952,     | Sequence 107        | Sequence 339      | Sequence 226,     |       | α,              | 20                |
| 14, Ap             | Tddv             | AĐ                 | Ap                 | AD                 | Tddy             | App               |                   | riddy           | TIDGA           | TIDGA           | day, o            | I, Ap              | Z, Ap              | 10725, A            | ?                 | , App             |       | TIGGA           | ), App            |

## ALIGNMENTS

```
US-11-075-646-6
  US-09-978-360A-473
  SOFTWARE: FASTSEQ
SEQ ID NO 6
LENGTH: 1158
  GENERAL INFORMATION:
  Sequence 473, Application US/09978360A Publication No. US20060009633A9
  Matches
  Query Match
APPLICANT: Edwards, Jean-Baptiste Dumas Milne
APPLICANT: Duclert, Aymeric
APPLICANT: Bouqueleret, Lydie
APPLICANT: Bouqueleret, Lydie
APPLICANT: Jobert, Severin
APPLICANT: Clusel, Catherine
TITLS OF INVENTION: Complementary DNA's Encoding Proteins with Signal Peptides
PILE REFERENCE: 56.US4.CIP
CURRENT FELLON NUMBER: US/09/978,360A
CURRENT FILING DATE: 2001-10-15
PRIOR APPLICATION NUMBER: US 60/066,677
  PRIOR APPLICATION NUMBER: US 60/550,677 PRIOR FILING DATE: 2004-03-05
  NUMBER OF SEQ ID NOS:
  TYPE: PRT
ORGANISM: Homo sapiens
  Local Similarity
  403 SIFEESSTPTTIDEYSDNNPSFTDDSSGDESSYS
  1 ALFPEVFSPTP-DENSDONSRSSSOASGITGSYS
  Conservative
  for Windows Version 4.0
  31.1%;
  υ
••
  Score 54.5;
Pred. No. 15
  Mismatches
  15;
  DB 7;
  33
  436
  14;
  Length 1158;
  Indels
  1:
  1;
```

```
US-11-054-515-3229
; Sequence 3229, Application US/11054515
; Publication No. US20050255532A1
   밁
   5
   RESULT 3
US-11-087-099-1355
   밁
   ş
  RESULT 4
   ; SEQ ID NO 1355
; LENGTH: 339
; TYPE: PRT
; ORGANISM: Colletotrichum gloeosporioides f.
US-11-087-099-1355
   US-09-978-360A-473
   Sequence 1355, Application US/11087099
Publication No. US20060041961A1.
GENERAL INFORMATION:
APPLICANT: Abad, Mark S. et al.
TITLE OF INVENTION: Genes and Uses for Plant Improvement FILE REFERENCE: 38-21(5350) B EP CURRENT APPLICATION NUMBER: US/11/087,099
CURRENT FILING DATE: 2005-03-22
NUMBER OF SEQ ID NOS: 12464
  Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 810
SOFTWARE: Patent.pm
SEQ ID NO 473
   Matches
   Query Match
   Query Match
   Matches
  LENGTH: 250
TYPE: PRT
ORGANISM: Homo mapienm
FEATURE:
NAME/KEY: SIGNAL
LOCATION: -85..-1
   PRIOR PRIOR
  PRIOR APPLICATION NUMBER: US 09/247,155
PRIOR FILING DATE: 1999-02-09
  PRIOR
  NAME/KEY: misc feature LOCATION: (-30)
OTHER INFORMATION: unknown
   FEATURE:
   OR APPLICATION NUMBER: US 60/096,116
OR FILING DATE: 1998-08-10
OR APPLICATION NUMBER: US 60/099,273
OR FILING DATE: -09-04
OR APPLICATION NUMBER: US 09/191,997
OR FILING DATE: 1998-11-13
OR FILING DATE: 1998-12-17
OR APPLICATION NUMBER: US 09/215,435
OR FILING DATE: 1998-12-17
OR APPLICATION NUMBER: PCT/IB98/02122
OR FILING DATE: 1998-12-17
  29.7%;
Local Similarity 33.3%;
Nes 10; Conservation
  Local
   APPLICATION NUMBER: US 60/069,957
  APPLICATION NUMBER: US 60/081,563 FILING DATE: 1998-04-13
  FILING DATE: 1998-02-09
  FILING DATE: 1997-12-17
APPLICATION NUMBER: US 60/074,121
   216
   306
   σ
   w
   12;
  Similarity
   PPEYVTPTPVTYSAASRSQSPQASG 330
   FPEVFSPTPDENSDONSRSSSOASG 27
   ELREPAPGTNOROPSKKASKGKGLRGSAKI 245
   EVFSPTPDENSDQNSRSSSQASGITGSYSV 34
   29.7%;
nilarity 48.0%;
Conservative
   Score 52; DB 7
Pred. No. 7.9;
2; Mismatches
   اد
   Score 52; DB Pred. No. 5.5; 6; Mismatches
   DB 5;
   DB 7; Length 339;
  sp.
   14;
  malvae
   Length 250;
   Indels
   0
   0
   Gaps
   Gaps
   0
   0
```

```
APPLICANT: VIAAMS INTERUNIVERSITAIR INSTITUUT VOC
TITLE OF INVENTION: GENES AND USES THEREOF TO MOI
FILE REFERENCE: DIN/SEM/V116
CURRENT APPLICATION NUMBER: US/10/991,285
CURRENT FILING DATE: 2004-11-16
PRIOR APPLICATION NUMBER: EP02076973.3
PRIOR FILING DATE: 2002-05-17
NUMBER OF SEQ ID NOS: 901
SOFTWARE: Patentin version 3.1
SOFTWARE: Patentin version 3.1
   皮
   CURRENT APPLICATION NUMBER: US/11/054,515
CURRENT FILING DATE: 2005-02-10
PRIOR APPLICATION NUMBER: 60/543,296
PRIOR PILING DATE: 2004-02-11
PRIOR PILING DATE: 2004-02-11
PRIOR PILING DATE: 2004-06-18
PRIOR PILING DATE: 2004-05-18
PRIOR PILING DATE: 2002-11-14
PRIOR PILING DATE: 2002-11-14
PRIOR PILING DATE: 2002-11-16
PRIOR PILING DATE: 2001-11-16
PRIOR PILING DATE: 2001-11-16
PRIOR PILING DATE: 2001-11-16
PRIOR PILING DATE: 2001-05-15
PRIOR APPLICATION NUMBER: 60/340,817
PRIOR APPLICATION NUMBER: 09/880,748
PRIOR APPLICATION NUMBER: 09/880,748
PRIOR APPLICATION NUMBER: 09/880,748
PRIOR PILING DATE: 2001-06-15
PRIOR FILING DATE: 2001-06-15
PRIOR FILING DATE: 2001-06-15
  밁
                                      Ś
  RESULT 5
US-10-991-285-872
  S
   US-10-991-285-872
  ; ORGANISM: Human sapiens
US-11-054-515-3229
   Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 3247
SEQ ID NO 3229
LENGTH: 266
  Sequence 872, Applic Publication No. US20 GENERAL INFORMATION:
   Query Match 29.4%;
Best Local Similarity 50.0%;
Matches 14; Conservative
  Matches
  Query Match
Best Local Similarity
   GENERAL INFORMATION:
  PRIOR APPLICATION NUMBER: 60/293,499 PRIOR FILING DATE: 2001-05-25
   APPLICANT: Ruben et al.
TITLE OF INVENTION: Antibodies that Immunospecifically Bind
   PRIOR FILING DATE: 2000-10-17
   PRIOR APPLICATION NUMBER: 60/277,379
PRIOR FILING DATE: 2001-03-21
   FEATURE:
NAME/KEY: MISC FEATURE
OTHER INFORMATION: MAP3
  TYPE: PRT
   ORGANISM: Nicotiana tabacum
   TYPE: PRT
   LENGTH:
   APPLICATION NUMBER: 60/240,816
  APPLICATION NUMBER: 60/276,248 FILING DATE: 2001-03-16
   118 PAPGEGNSSQNSRNKRAVQGPEETGSYT 145
  30
  9
FSEIFSPMSSSNALPNSPSSSFGS
                         FPEVFSPTPDENSDQNSRSSSQAS 26
  PTPDE-NSDONSRSSSOASG--ITGSYS 33
   Application US/10991285
o. US20060041962A1
  Conservative
  29.1%;
   Score 51.5; Di
Pred. No. 7;
2; Mismatches
  2:
  Score 51; DB 6;
Pred. No. 6.8;
2; Mismatches 1
  53
   贸
  VOOR BIOTECHNOLOGIE VZW
  , 7;
   MODULATE SECONDARY METABOLITE BIOSYNTHES
   10;
   Length 227;
   Length 266;
  Indels
   Indels
  BLyS
  ω
--
  ٥,
  Gaps
   0
  2
```

US-11-072-512-2709

equence 2709, Application US/11072512 ublication No. US20060029945A1

TAKAO

```
CURRENT APPLICATION NUMBER: US/10/995,561
CURRENT FILING DATE: 2004-11-24
NUMBER OF SEQ ID NOS: 85702
SOFTWARE: PastSEQ for Windows Version 4.0
SEQ ID NO 612
LENGTH: 361
TYPE: PRT
ORGANISM: Homo sapiens
US-10-995-561-612
  밁
   ફ
  US-11-072-512-2709
   JS-10-995-561-612
  SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 2709
LENGTH: 571
  Query Match
Best Local Similarity
Query Match 28.
Best Local Similarity 37.
Matches : 11; Conservative
   Sequence 612, I
   Matchee
  APPLICANT: MASUHO, YASUHIKO
TITLE OF INVENTION: Novel full length cDNA
FILE REFERENCE: 084335-0191
CURRENT APPLICATION NUMBER: US/11/072,512
CURRENT FILING DATE: 2005-03-07
  PRIOR APPLICATION NUMBER: JP 2001-379298
PRIOR FILING DATE: 2001-11-05
NUMBER OF SEQ ID NOS: 4096
   CURRENT FILING DATE: 2005-03-07
PRIOR APPLICATION NUMBER: US 60/350,978
PRIOR FILING DATE: 2002-01-25
  FILE REFERENCE: CL001559
   APPLICANT: CARGILL, MICHELE et al.
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: CARDIOVASCULAR DISORDERS AND DRUG RE-
TITLE OF INVENTION: DETECTION AND USES THEREOF
  TYPE: PRT
   ORGANISM: Homo sapiens
  359 PE--SPSPAPSLEENHRPGSQTSSHTSS-SVS 387
   15,
   4 PEVFSPTPDENSDQNSRSSSQASGITGSYSVS 35
  SUGIYAMA, TOMOYI
OTSUKI, TETSUJI
WAKAMATSU, AI
SATO, HIROYUKI
   OTSUKA, KAORU
NAGAI, KEIICHI
IRIE, RYOTARO
TAMECHIKA, ICHIRO
   ISHII, SHIZUKO
YAMAMOTO, JUN-ICHI
ISONO, YUUKO
  Application US/10995561
   SEKI, NAOHIKO
KOSHIKAWA, TSUTOMU
DTSUKA, MOTOYUKI
   Conservative
  GAHARI,
   US20050272054A1
   YURI
  KENJI
  TOMOYASU
  28.3%; Score 49.5;
46.9%; Pred. No. 32;
                     28.0%;
                   Score 49; DB 6; Length 361; Pred. No. 22;
   Mismatches
  DB 7; Length 571;
  AND DRUG RESPONSE,
   10;
     13;
   Indels
   ű.
     0,
```

```
LENGTH: 361
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-130-206-6
   片
   RESULT 9
US-10-517-939-274
  밁
   US-11-130-206-6
  ; LOCATION: (1)...(74)
US-10-517-939-274
  NUMBER OF SEQ ID NOS: 380
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 274
LENGTH: 377
TYPE: PRT
   SEQ ID NO 6
  GENERAL INFORMATION:
  Sequence 6, Application US/11130206
Publication No. US20060019340A1
   Matches
  Query Match
   Sequence 274, A Publication No.
   TITLE OF INVENTION: CD44 POLYPEPTIDES, POLYNUCLEOTIDES ENCODING SAME, ANTIBODIES
TITLE OF INVENTION: DIRECTED THEREAGAINST AND METHOD OF USING SAME FOR DIAGNOSING AN
TITLE OF INVENTION: TREATING INFLAMMATORY DISEASES
FILE REPERENCE: 29306
CURRENT FILING DATE: 205-05-17
NUMBER OF SEQ ID NOS: 44
Query Match
Best Local Similarity
   GENERAL INFORMATION:
   APPLICANT: Naor, David
APPLICANT: Nedvetzki , S
APPLICANT: Golan, Itshak
   SOFTWARE: PatentIn version 3.3
   PRIOR APPLICATION NUMBER: PCT/US03/19153
PRIOR FILING DATE: 2003-06-16
PRIOR APPLICATION NUMBER: 60/389,299
PRIOR FILING DATE: 2002-06-14
  FILE REFERENCE: 564462007901
CURRENT APPLICATION NUMBER: US/10/517,939
CURRENT FILING DATE: 2004-12-13
   APPLICANT: Blum, David
APPLICANT: Esteghlalian, Alireza
FITLE OF INVENTION: XYLANASES, NUC
FITLE OF INVENTION: AND METHODS F
  APPLICANT: Steer, Brian
  APPLICANT:
  APPLICANT:
   PEATURE:
NAME/KEY: SIGNAL
   ORGANISM: Unknown FEATURE:
   OTHER INFORMATION: Obtained from an environmental sample.
   7 Match 28.0%; Score 49; DB Local Similarity 37.9%; Pred. No. 22; 1es 11; Conservative 5; Mismatches
   165 PEDIYPSNPTDDDVSSGSSERSSTSGGY 193
  165
   4 PEVFSPTPDENSDONSRSSSOASGITGSY 32
  PEVFSPTPDENSDONSRSSSOASGITGSY
  PEDIYPSNPTDDDVSSGSSSERSSTSGGY 193
  Callen, Walter
Healey, Shaun
  Hazlewood, Geoff
   Wu, Di
   Application US/10517939
   US20060003433A1
   AND METHODS FOR MAKING AND
  28.0%;
   Shlomo
Score 49;
Pred. No.
   NUCLEIC ACIDS ENCODING THEM DS FOR MAKING AND USING THEM
  32
  DB 6;
23;
  B
  7; Length 361;
   13;
   Indels
   0
   Gaps
   0
```

```
CURRENT APPLICATION NUMBER: US/10/995,561
CURRENT FILING DATE: 2004-11-24
NUMBER OF SEQ ID NOS: 85702
SOFTWARE: FRRSTSEQ for Windows Version 4.0
SEQ ID NO 616
SEQ ID NO 616
LENGTH: 425
TYPE: PRT
ORGANISM: Homo sapiens
US-10-995-561-616
  RESULT 12
US-10-995-561-611
   밁
  ş
  RESULT 11
US-10-995-561-616
   밁
  RESULT 10
US-10-995-561-614
  ᅜ
  δ
   ; ORGANISM: Homo sapiens
US-10-995-561-614
   GENERAL INFORMATION:
APPLICANT: CARGILL, Michele et al.
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: CARDIOVASCULAR DISORDERS AND DRUG RESPONSE, METHODS
TITLE OF INVENTION: DETECTION AND USES THEREOF
FILE REFERENCE: CL001559
CURRENT APPLICATION NUMBER: US/10/995,561
CURRENT FILING DATE: 2004-11-24
NUMBER OF SEQ ID NOS: 85702
SOCTWARE: FBSESEQ for Windows Version 4.0
SEQ ID NO 614
LENGTH: 395
TYPE: DETECTION OF THE PROPERTY OF
   Sequence 611, Application US/10995561
publication No. US20050272054A1
GENERAL INFORMATION:
APPLICANT: CARGILL, Michele et al.
TITLE OF INVENTION: CARDIOVASCULAR:
TITLE OF INVENTION: CARDIOVASCULAR:
  Sequence 616, Application US/10995561

Publication No. US20050272054A1

GENERAL INFORMATION:
APPLICANT: CARGILL, Michele et al.
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: CARDIOVASCULAR DISORDERS AND DRUG RESTITLE OF INVENTION: DETECTION AND USES THEREOF
FILE REFERENCE: CL001559
   Query Match
Best Local &
   Sequence 614, Appublication No.
   Matches
   Matches
   Query Match
  LENGTH: 39
  Local
   165
   165 PEDIYPSNPTDDDVSSGSSSERSSTSGGY 193
   ch 28.0%;
1 Similarity 37.9%;
11; Conservative
   ch 28.0%; 1 Similarity 37.9%; 11; Conservative
   4 PEVFSPTPDENSDQNSRSSSQASGITGSY 32
   12; Conservative
   4 PEVFSPTPDENSDQNSRSSSQASGITGSY 32
   PTPDENSDQNSRSSSQASGITGSYSVS 35
   PEDIYPSNPTDDDVSSGSSSERSSTSGGY 193
  Application US/10995561
  US20050272054A1
Michele et al.
GENETIC POLYMORPHISMS ASSOCIATED WITH
CARDIOVASCULAR DISORDERS AND DRUG RE
   ; Score 49; DB;
; Pred. No. 27;
5; Mismatches
   Score 49; DB Pred. No. 24; 5; Mismatches
  ω
••
   Mismatches
  60
   6
   6
   12;
   13;
   Length 425;
   Length 395
   Indels
  RESPONSE,
   0,
  0
   0
   Gaps
   0
   0
   0
```

```
CURRENT APPLICATION NUMBER: US/10/995,561
; CURRENT FILING DATE: 2004-11-24
; NUMBER OF SEQ ID NOS: 85702
; SOFTWARE: PastSEQ for Windows Version 4.0
; SEQ ID NO 610
; SEQ ID NO 610
; LENGTH: 535
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-995-561-610
  밁
  S
  ; ORGANISM: Homo sapiens US-10-995-561-611
  RESULT 14
US-10-995-561-617
  S
  밁
  ; ORGANISM: Homo sapiens
US-10-995-561-617
  US-10-995-561-610
Query Match
Best Local Similarity 37.9
11; Conservative
  CURRENT APPLICATION NUMBER: US/10/995,561
CURRENT FILING DATE: 2004-11-24
NUMBER OF SEQ ID NOS: 85702
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 617
LENGTH: 691
TYPE: PRT
  FILE REFERENCE: CL001559
CURRENT APPLICATION NUMBER: US/10/995,561
CURRENT FILING DATE: 2004-11-24
NUMBER OF SEQ ID NOS: 85702
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 611
  Sequence 617, Application No. US200 GENERAL INFORMATION:
  Query Match 28.0%;
Best Local Similarity 37.9%;
Matches 11; Conservative
   GENERAL INFORMATION:
  Sequence 610, Application US/10995561
Publication No. US20050272054A1
  Matches
   Query Match
Best Local Similarity
   APPLICANT: CARGILL, Michele et al.
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: DETECTION AND USES THEREOF
FILE REFERENCE: CL001559
  APPLICANT: CARGILL, Michele et al.
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED
TITLE OF INVENTION: CARDIOVASCULAR DISORDERS AND DRU
TITLE OF INVENTION: DETECTION AND USES THEREOF
   TITLE OF INVENTION: DETECTION AND USES THEREOF
  FILE REFERENCE: CL001559
   LENGTH: 4
TYPE: PRT
  165
  4 PEVFSPTPDENSDONSRSSSOASGITGSY 32
  4 PEVFSPTPDENSDQNSRSSSQASGITGSY 32
  PEDIYPSNPTDDDVSSGSSSERSSTSGGY 193
  PEDIYPSNPTDDDVSSGSSERSSTSGGY 193
   Application US/10995561 o. US20050272054A1
  Conservative
   28.0%;
                                 28.0%;
                Score 49; DB of Pred. No. 47; S; Mismatches
  Score 49; DB Pred. No. 35; S; Mismatches
  υ
••
  Score 49; DB
Pred. No. 32;
5; Mismatches
  ა
••
                ű
  ٥.
  6
                  13;
  13;
  13;
  Length 691;
  Length 493;
                  Indels
  Indels
   RESPONSE, METHODS
  RESPONSE, METHODS
  0
  0,
                  0
  ဝှု
  0
  0
                  0
```

```
Sequence 4, Application US/11130206

Publication No. US20060019340A1

GENERAL INFORMATION:

APPLICANT: Nedvetki, Shlomo
APPLICANT: Nedvetki, Shlomo
APPLICANT: Golan, Itshak

TITLE OF INVENTION: CD44 POLYPEPTIDES, POLYNUCLECTIDES ENCODING SAME, ANTIBODIES
TITLE OF INVENTION: DIRECTED THEREAGAINST AND METHOD OF USING SAME FOR DIAGNOSING AN

TITLE OF INVENTION: TREATING INFLAMMATORY DISEASES

FILE REFERENCE: 29306

CURRENT FILING DATE: 205-05-17

NUMBER OF SEQ ID NOS: 44

SOFTWARE: PATENT NOS: 44

SOFTWARE: PATENT VERSION 3.3

SEQ ID NO 4

LENGTH: 699
TYPE: PRT
ORGANISM: Homo sapiens
   밁
   ક
   음 &
   RESULT 15
US-11-130-206-4
Search completed: March 3, 2006, 14:19:05 Job time : 2.66667 secs
  Query Match 28.0%; Score 49; DB 7; Length 699; Best Local Similarity 37.9%; Pred. No. 48; Matches 11; Conservative 5; Mismatches 13; Indels
  165 PEDIYPSNPTDDDVSSGSSERSSTSGGY 193
  4 PEVFSPTPDENSDQNSRSSSQASGITGSY 32
   0; Gaps
   0,
```

Color Many (13010)

```
Scoring table:
   sequence:
  Title:
Perfect score:
  Run
  Database
   Minimum DB
Maximum DB
  Total number of hits satisfying chosen parameters:
   OM protein -
  Post-processing: Minimum Match 0%
   seq length: 0
seq length: 2000000000
   protein search, using sw model
  March 3, 2006, 13:19:17; Search time 17.6385 Seconds (without alignments) 822.038 Million cell updates/sec
   BLOSUM62
  US-10-646-873-46
176
   2443163 seqs, 439378781 residues
   Gapop 10.0 , Gapext 0.5
  A_Geneseq_21:*
1: geneseqp1980s:*
  Maximum Match 100%
Listing first 45 su
   EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
  GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd
   geneseqp1990s:*
geneseqp2000s:*
geneseqp2001s:*
geneseqp2002s:*
                geneseqp2003as:*
geneseqp2003bs:*
geneseqp2004s:*
geneseqp2005s:*
  summaries
   2443163
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

| Regult<br>No. | Score | Query<br>Match I | Length | 80 | ID       | cription           |
|---------------|-------|------------------|--------|----|----------|--------------------|
| _ :           | 176   | 100.0            | 33     | υ¦ | AAW79680 | Ę.                 |
| N             | 176   |                  | 33     | 4  | AAE07323 |                    |
| ω             | .176  | 100.0            | 33     | 0  | ADA26383 | Ada26383 Synthetic |
| 4             | 176   | 100.0            | 33     | œ  | ADN17176 | σ                  |
| ហ             | 172   | 97.7             | 172    | 4  | AAG73987 | Aag73987 Human col |
| 0             | 171   | 97.2             | 215    | N  | AAW79681 | 1 Human            |
| 7             | 171   |                  | 215    | 4  | AAE07324 | Aae07324 Human CS  |
| 8             | 171   | 97.2             | 215    | თ  | ADA26384 | Ada26384 Synthetic |
| 9             | 171   | 97.2             | 215    | 8  | ADN17177 | CS198              |
| 10            | 171   |                  | 679    | N  | AAW79676 | Human              |
| 11            | 171   |                  | 679    | 4  | AAE07319 | Human              |
| 12            | 171   | 97.2             | 679    | 4  | AAM78590 |                    |
| 13            | 171   | 97.2             | 679    | σ  | ADA26379 | Predic             |
| 14            | 171   |                  | 679    | 8  | ADN17172 |                    |
| 15            | 171   | 97.2             | 692    | æ  | ADX97562 | Pancre             |
| 16            | 168   | 95.5             | 679    | 7  | ADG14341 | Human              |
| 17            | 166   | خ                | 672    | 4  | AAM79574 |                    |
| 18            | 89    | 50.6             | 43     | 8  | ABO60042 | Abo60042 Human gen |
| 19            | 57    |                  | 124    | N  | AAY50146 |                    |
| 20            | 57    | 32.4             | 124    | N  | AAY50149 |                    |
| 21            | 57    | 32.4             | 124    | N  | AAY50148 |                    |
| 22            | 57    | 32.4             | 124    | ผ  | AAY50147 | Aay50147 Antibody  |
| 23            | 57    | 32.4             | 124    | N  | AAY50150 | Aay50150 Antibody  |
| 24            | 57    | 32.4             | 124    | σ  | ABB98753 | Abb98753 Human res |
|               |       |                  |        |    |          |                    |

| 45        | 44        | 43       | 42       | 41       | 40       | 39        | 38        | 37        | 36        | 35        | 34       | 33        | 32        | 31        | 30        | 29        | 28        | 27       | 26       | 25       |
|-----------|-----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|----------|
| 56        | 56        | 56       | 56       | 56       | 56       | 56        | 56        | 56        | 56        | 56        | 57       | 57        | 57        | 57        | 57        | 57        | 57        | 57       | 57       | 57       |
| 31.8      | 31.8      | 31.8     | 31.8     | 31.8     | 31.8     | 31.8      | 31.8      | 31.8      | 31.8      | 31.8      | 32.4     | 32.4      | 32.4      | 32.4      |           |           |           | N        | Ñ        |          |
| 523       | 523       | 523      | 523      | 523      | 523      | 523       | 523       | 484       | 483       | 142       | 658      | 614       | 601       | 480       | 472       | 432       | 124       | 124      | 124      | 124      |
| 4         | 4         | ω        | N        | ผ        | N        | N         | N         | œ         | 9         | 5         | v        | υ         | տ         | ഗ         | N         | ŋ         | σ         | δ        | σ        | 6        |
| AAB81084  | AAB20263  | AAY54905 | AAW37986 | AAW59135 | AAR98212 | AAR66608  | AAR37493  | ADE28340  | AEB45520  | ADK34147  | AAM49759 | AAO17494  | AAM49760  | AAO17495  | AAY50166  | AA017498  | ABB98750  | ABB98751 | ABB98752 | ABB98754 |
| Aab81084  | Aab20263  | Aay54905 | Aaw37986 | Aaw59135 | Aar98212 | Aar66608  | Aar37493  |           |           |           | Aam49759 | Aao17494  | Aam49760  | Aao17495  | Aay50166  | Aao17498  | A508750   | Abb98751 | ADD98752 | ADD98/54 |
| Human Cac | Human Cac | ່ດ       | _        |          | -        | Human cdc | cdc25A. 3 | Human KPP | Human Cac | Novel hum |          | Antibody- | TNF-selec | Antibody- | Human res | Antibody- | Human res |          | н        | _        |

# ALIGNMENTS

RESULT 1 AAW79680 Gastrointestinal tract; GI tract; cancer; disease; detection; CS198; human; predisposition; treatment; Barret's oesophagus; gastric ulcer gastritis; leiomyoma; polyps; Crohn's disease; ulcerative colitis; AAW79680 standard; protein; 33 AA. Synthetic. Synthetic CS198 derived peptide #4. 11-JAN-1999 AAW79680; 30-MAR-1998; 08-OCT-1998. W09844159-A1 (first entry) 98WO-US006251.

31-MAR-1997; 97US-00828855.

Billing-Medel PA, Granados EN, Hay Roberts-Rapp L, 1 PA, Cohen M, Colpitts TL, Hayden M, Hodges SC, Klass L, Russell JC, Stroupe SD; Friedman PN, Gordon J;
MR, Kratochvil JD;

(ABBO ) ABBOTT LAB.

WPI; 1998-542714/46.

New gastrointestinal polynucleotides, CS198, and their detection - used for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastritis.

Claim 26; Page 103; 127pp; English.

AAW79677-W79680 are synthetic CS198 derived peptide fragments which are used in a method to detect the presence of a target human CS198 polynucleotide in a test sample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be used in detecting, diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oesophagus, gastric ulcer, gastritis, leiomyoma, polyps, Crohn's disease, ulcerative

```
SXS
   밁
   5
   Query Match
Best Local S
Matches 33
The invention relates to a method of detecting the presence of a target CS 198 polynucleotide comprising contacting the test sample with at least one CS 198-specific polynucleotide. The method is useful for detecting diseases of the gastrointestinal (GI) tract organs, particularly cancer. The CS 198 polynucleotides, polypeptides and antibodies are useful for detecting, diagnosing, staging, monitoring, prognosticating, preventing, treating or determining predisposition to diseases and conditions of the GI tract such as cancer, gastric ulcer, gastritis, Crohn's disease, ulcerative colitis, pancreatitis and Barret's oesophagus. The CS 198 polypeptides are useful as standards or reagents in diagnostic
   Claim 17;
   Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, comprises contacting test sample with at least one CS 198-specific polynucleotide.
  WPI; 2001-496163/54.
   Granados EN,
  Billingel PA,
   31-MAR-1997;
  30-MAR-1998;
   02-AUG-2001.
  US2001010904-A1
   Homo sapiens
   CS 198; gastrointestinal tract disease; GI tract; cancer; gastric ulcer; gastritis; Crohn's disease; ulcerative colitis; pancreatitis; Barret's oesophagus; gene therapy; drug screening; human.
  Human CS 198 peptide
  06-NOV-2001
   AAE07323;
   AAE07323
   Sequence
  colitis, and pancreatitis
   Roberts-Rapp L,
   (KRAT/)
(ROBE/)
(RUSS/)
  (BILL/)
(COHE/)
(COLP/)
(FRIE/)
  (HAYD/)
   (GORD/)
  STRO/)
  KLAS/)
   33,
   KRATOCHVIL J
ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
  HAYDEN M.
HODGES S C.
KLASS M R.
   COLPITTS T L. FRIEDMAN P N. GORDON J.
  Similarity
   GORDON J.
GRANADOS E N.
   COHEN
   BILLINGEL P.A.
   EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE
  ü
  standard;
   EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE
   Page 52;
   100.0%;
ilarity 100.0%;
Conservative (
  ξ
   , Cohen M,
Hayden M,
L, Russell
   (first entry)
   97US-00828855.
  98US-00050516.
   peptide;
  68pp; English.
   ר ס
  #4.
   Colpitts TL, Friedman Hodges SC, Klass MR, JC, Stroupe SD;
   3
   0
   Score 176; DB 2;
Pred. No. 5.4e-17;
  Mismatches
  Friedman
   33
   ω
W
  PN, Gordon J;
Kratochvil JD;
   Length 33;
  Indels
   0
   Gaps
  0
```

```
RESULT 3
ADAZGARA
ADAZA
XX ADAZ
AC ADAZ
XX ADAZ
AC CS1:
CS Synt
XX CS1:
CW Gast
XX Gas
  뮍
  S
  88888888888%&
  Matches
   Query Match
Best Local
   immunoassays, as components or as target sites for various therapies. Antibodies directed against at least one epitope contained within these polypeptides are useful as delivery agents for therapeutic agents, in diagnostic tests and for sorcening for conditions or diseases associated with CS 198, particularly cancer. Monoclonal antibodies may also be used for the generation of chimeric antibodies for therapeutic use. The CS 198 polymelectide is also useful in gene therapy and one screening. The method of the invention provides an alternative, non-surgical diagnostic method capable of detecting early stage GI tract disease such as cancer. The present sequence is a peptide derived from human CS 198 polypeptide
  cancer prognosticating; cancer prevention; can
gastrointestinal tract disorder; gene therapy.
   Billingel PA,
Granados EN,
   (FRIE/)
  23-OCT-2002;
  01-MAY-2003
   US2003082619-A1.
  Synthetic peptide based on CS198 protein
   20-NOV-2003
   ADA26383 standard;
   Sequence
  consensus sequence
   WPI; 2003-596961/56.
  Roberts-Rapp
  (COTB/)
  30-MAR-1998;
   31-MAR-1997;
   (RUSS/
  (KRAT/
  (KLAS/)
  (HAYD/
  (GRAN/)
   (BILL/)
   (ROBE/)
   (HODG)
   cancer diagnosis; cancer staging; cancer monitoring;
  33;
  KRATOCHVIL J D.
ROBERTS-RAPP L.
RUSSELL J C.
STROUPE S D.
  1 EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
   GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
  COLPITTS
   Similarity
   BILLINGEL P A.
  KRATOCHVIL J
  COLPITTS T L. FRIEDMAN P N.
  မ
  EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE
   AA;
  Conservative
  ŗ
   2002US-00278547.
   (first entry)
  Cohen M,
Hayden MA,
L, Russell
  97US-00828855.
98US-00050516.
   protein;
   100.0%;
   Colpitts TL,
Hodges SC,
JC, Stroupe
   33
  <u>.</u>
   Score 176; DB 4;
Pred. No. 5.4e-17;
Mismatches 0;
   8
  Klass
SD;
   Friedman
Klass MR,
  #4
  ω
u
  cancer;
  PN, Gordon
Kratochvil
  Length 33
  Indels
  មូជ
  0
  Gaps
  CS 198
  0
```

Detecting the presence of a target CS198 polynucleotide in a test sample comprises contacting the sample with a CS198 specific polynucleotide and detecting the presence of the target CS198 polynucleotide in the test

sample.

Claim 17; Page 52; 67pp; English

The invention describes a method of detecting the presence of a target CC CS198 polynucleotide in a test sample. The method comprises contacting CC the test sample with at least one CS198 specific polynucleotide or its CC complement, and detecting the presence of the target CS198 polynucleotide for its CC complement, and detecting the presence of the target CS198 polynucleotide in the test sample, where the CS198-specific polynucleotide has at least CC soft identity to a polynucleotide having any of the 27 fully defined CC sequences of 34-2894 bp (S1-27) given in the specification, or their CC diagnosing, staging, monitoring, prognosticating, preventing or treating, CC or determining the predisposition of an individual to, diseases and CC conditions of the gastrointestinal tract, e.g. cancer and in gene CC therapy. This is the amino acid sequence of a synthetic peptide based on CC the predicted human CS198 protein sequence derived from the CS198 CC consensus sequence shown in seq id 27.

```
PRX DRX PRIX BRANCE REPRESENTATION OF THE PRIX BRANCE REPRESENTATION OF TH
  31-MAR-1997;
30-MAR-1998;
  04-MAR-2004
Diagnosing diseases such as cancer of the gastrointestinal tract, by detecting aberrant expression or activity of the CS198 polypeptide,
  Billingel PA,
Granados EN,
   22-AUG-2003; 2003US-00646873.
  WPI; 2004-313754/29
   Roberts-Rapp
   (KLAS/)
   (GORD/)
   (COTA/)
   (FRIE/)
   (ATTE
   ROBE/)
   KRAT/
  HAYD/)
  GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
KLASS M R.
   KRATOCHVIL J I
ROBERTS-RAPP I
RUSSELL J C.
STROUPE S D.
   COLPITTS T L. FRIEDMAN P N.
  BILLINGEL P A.
  COHEN M
   ۲
   Cohen
Hayden
  97US-00828855
98US-00050516
  Russell
   ₹.3
   Colpitts TL,
Hodges SC,
  'n,
   Klass
SD;
  Friedman PN, Gordon
Klass MR, Kratochvil
   gg;
                                   δĢ
        and
```

host cell and

culturing the

```
RESULT 5
AAG73987
ID AAG7
  밁
   S
  Query Match
Best Local :
   Matches
  The invention relates to reagents and methods for detecting diseases of the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polynucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of diseases or conditions associated with aberrant expression or activity of the CS198 polypeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 peptide used to illustrate the method of the
   Sequence 33 AA;
   and treatment of diseases associated with inappropriate P expression. For example, N and P may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of P by expressing inactive proteins or to supplement the patients own production of P. Additionally, N may be used to produce the colon cancer-associated Ps, by inserting the nucleic acids to produce the colon cancer-associated Ps, by inserting the proteins. N and P into a host cell and culturing the cell to express the proteins. N and P
  AAH32943 to AAH37195 and AAG73514 to AAG77788 represent human colon cancer-associated nucleic acid molecules (N) and proteins (P), where the proteins are collectively known as colon cancer antigens. The colon cancer antigens have cytostatic activity and can be used in gene therapy and vaccine production. N and P may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate P expression. For
  AAG73987;
  AAG73987 standard;
   Claim 17; SEQ ID NO 46; 67pp; English.
   associated treatment methods
   Nucleic acids encoding 4277 human useful for preventing, diagnosing
  29-SEP-1999;
03-NOV-1999;
   05-APR-2001.
   colorectal carcinoma
  Human; colon cancer;
  Human colon cancer antigen
   03-SEP-2001
  Claim 11; Page 6550-6551; 9803pp;
  N-PSDB; AAH33418
  WPI; 2001-235357/24.
  Ruben
   28-SEP-2000; 2000WO-US026524
  WO200122920-A2
   Homo sapiens
   (HUMA-) HUMAN GENOME SCI INC
  SM,
   33;
   Similarity
  EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
  EDSVDSAPPGORKKEOWYAGINPSDGINSEVLE
  Barash SC,
   Conservative
   (first entry)
  99US-0157137P
99US-0163280P
  protein; 172
   100.0%;
   colon
  Birse CE,
   cancer antigen; diagnosis; detection;
  protein SEQ
   <u>,</u>
   Score 176; DB 8;
Pred. No. 5.4e-17;
  8
   Mismatches
   colon cancer-associated polypeptides, and/or treating colorectal cancers.
  English.
  Rosen
  ID NO:4751
  δ
  Length 33;
   Indels
   ç,
   Gaps
```

RESULT 4 ADN17176

ADN17176 standard; peptide; 33 AA.

Unidentified

US2004043406-A1.

CS198 peptide #4 17-JUN-2004

(first entry)

Gastrointestinal tract; GI tract; CS198; cancer; gene therapy

Ś 밁

EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE 33 EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE 33

Query Match Best Local S Matches 33

Similarity

100.0%;

Score 176; DB 6; Pred. No. 5.4e-17; Mismatches

Length Indels

33

0

33;

Conservative

0

0

0

Gaps

0

Sequence

LJ LJ

Ŗ,

ន្តន្តន្តន្ត្

밁 5

```
Best Loc
Matches
  Best Loc
Matches
   Query Match
   Query Match
   Billing-Medel PA
Granados EN, Ha
Roberts-Rapp L,
   is used in a method to detect the presence of a target CS198 polynucleotide in a test sample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be used in detecting, diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oseophagus, gastric ulcer, gastritis, leiomyoma, polyps, Crohn's disease, ulcerative
   Gastrointestinal tract; GI tract; cancer; disease; detection; C human; predisposition; treatment; Barret's oesophagus; gastric gastritis; leiomyoma; polyps; Crohn's disease; ulcerative colit
  can be used in the prevention, diagnosis and treatment of colorectal carcinomas and cancers. AAH37196 to AAH37204 and AAB77789 represent sequences used in the exemplification of the present invention. N.B. Pages 666 to 682 and page 7053 of the sequence listing were missing at time of publication, meaning no sequences are present for SEQ ID NO:1027 to 1052, 7921 and 7922
  New gastrointestinal polynucleotides, CS198, and their detection for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastritical contents of the content of the cont
   This sequence represents the C-terminal of the human CS198
  Claim
  31-MAR-1997;
   30-MAR-1998;
   08-OCT-1998
  WO9844159-A1
   Homo
   pancreatitis.
   Human CS198
  AAW79681
  AAW79681 standard;
   Sequence 172
   (ABBO ) ABBOTT LAB.
   Local
                         Local
   1998-542714/46
   sapiens.
  114
   26;
  l Similarity
32; Conserv
   Similarity
32; Conser
  EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE
  EDXVDSAPPGQRKKEQWYAGINPSDGINSEVLE 146
   Page 103; 127pp; English.
  protein
  Conservative
  Conservative
  pancreatitis
  ₹
   ž
   (first
  Hayden M,
  97US-00828855
   98WO-US006251
   , Cohen M, Colpitts TL, yden M, Hodges SC, Klass Russell JC, Stroupe SD;
   protein;
  C-terminal
   entry
                         97.2%;
97.0%;
  97.7%;
97.0%;
  215
Score 171; DB 2;
Pred. No. 2.2e-15;
0; Mismatches 1
  Score 172; DB 4;
Pred. No. 1.2e-15;
0; Mismatches 1
  B
   33
  Friedman PN, Gordon MR, Kratochvil JD;
  Length 172;
   Length 215;
     Indels
  Indels
   protein which
   gastritis
  0
  0
   ulcer;
Gaps
  ij
  Gaps
  0
     0
```

ን

```
RESULT 7
AABO77324
ID AABO77324
AID AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324
AABO77324

   문
   5
The invention relates to a method of detecting the presence of a target CC CS 198 polymucleotide comprising contacting the test sample with at least CC one CS 198 specific polymucleotide. The method is useful for detecting CC diseases of the gastrointestinal (GI) tract organs, particularly cancer. The CS 198 polymucleotides, polypeptides and antibodies are useful for CC detecting, diagnosing, staging, monitoring, prognosticating, preventing, CC treating or determining predisposition to diseases and conditions of the CC quitable such as cancer, gastric ulcer, gastritis, Crohn's disease, CC ulcerative colitis, pancreatitis and Barret's oceaphagus. The CS 198 polypeptides are useful as standards or reagents in diagnostic for contibodies directed against at least one epitope contained within these CC polypeptides are useful as delivery agents for therapeutic agents, in CC diagnostic tests and for screening for conditions or diseases associated with CS 198, particularly cancer. Monoclonal antibodies may also be used CC with CS 198, particularly cancer. Monoclonal antibodies may also be used CC method of the invention provides an alternative, non-surgical diagnostic method of the invention provides an alternative, non-surgical diagnostic
  CS 198; gastrointestinal tract disease; GI tract; cancer; gastritis; Crohn's disease; ulcerative colitis; pancreatitis;
   06-NOV-2001
   Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, comprise contacting test sample with at least one CS 198-specific polynucleotide.
   (KRAT/)
(ROBE/)
(RUSS/)
   (GRAN/)
(HAYD/)
  (COLP/)
(COLP/)
(FRIE/)
(GORD/)
  Homo gapiens
  CS 198; gastrointestinal tract
  AAE07324
   (HODG/)
   30-MAR-1998;
   02-AUG-2001
   Barret's oesophagus; gene therapy; drug screening; human.
   Human CS
   Claim 17; Page
  WPI; 2001-496163/54.
  Roberts-Rapp
   Granados EN,
  Billingel PA,
   31-MAR-1997;
   157
  μ
  GORDON J.
GRANADOS E N.
HAYDEN M.
HODGES S C.
KLASS M R.
KRATCCHVIL J I
ROBERTS -RAPP I
RUSELL J C.
STROUPE S D.
   COLPITTS T L.
FRIEDMAN P N.
  BILLINGEL P A.
   COHEN
  198 protein C-terminal portion
   EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE
   standard; protein;
   EDPVDSAPPGORKKEOWYAGINPSDGINSEVLE
   ۲
   (first entry)
   Cohen
Hayden
   52-53;
   97US-00828855
   98US-00050516
   Cohen M,
1yden M,
Russell
   68pp; English.
   Colpitts TL, Friedman Hodges SC, Klass MR, JC, Stroupe SD;
  215
   189
  33
  PN, Gordon
Kratochvil
   gastric ulcer;
  comprises
```

```
ঠ
   ឧឧឧ
  밁
  Matches
   Billingel
Granados E
   WPI;
  31-MAR-1997;
30-MAR-1998;
   01-MAY-2003
   Synthetic
  cancer prognosticating; cancer prevention; car gastrointestinal tract disorder; gene therapy.
  CS198;
   Synthetic
  20-NOV-2003
   ADA26384;
  Sequence
   method capable of detecting early stage GI tract disease such as cancer. The present sequence is C-terminal portion of human CS 198 polypeptide
The invention describes a method of detecting the presence of a target CS198 polynucleotide in a test sample. The method comprises contacting the test sample with at least one CS198 specific polynucleotide or its complement, and detecting the presence of the target CS198 polynucleotide in the test sample, where the CS198-specific polynucleotide has at least 50% identity to a polynucleotide having any of the 27 fully defined sequences of 34-2894 bp (S1-27) given in the specification, or their
  US2003082619-A1
  ADA26384 standard; protein; 215
  Detecting
   (FRIE/)
(GORD/)
(GRAN/)
  23-OCT-2002;
  (COHE/)
  Claim
  detecting
   (KRAT/)
   (HODG/)
  STRO
  BILL/)
  Local
   Match
   2003-596961/56
  157
  32,
   COHEN M.
COLPITTS T L.
FRIEDMAN P N.
GORDON J.
GRANADOS E N.
HAYDEM M A.
HAYDEM M A.
HAYDES S C.
KLASS M R.
  cancer diagnosis;
   _
   KRATOCHVIL J
ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
   Similarity
  EN,
  EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE
  215
   EDPVDSAPPGORKKEOWYAGINPSDGINSEVLE
  the presence of a target CS198 polynucleotide in a test sample contacting the sample with a CS198 specific polynucleotide and the presence of the target CS198 polynucleotide in the test
   peptide
  Conservative
   Š
   , Cohen M,
Hayden MA,
L, Russell
  ŗ
   2002US-00278547
   (first
  97US-00828855
98US-00050516
   ъ
  based
   Þ
   97.2%;
  entry)
   ۲
  9
   Colpitts TL,
Hodges SC,
I JC, Stroupe
   cancer prevention; cancer;
  cancer staging;
   English
   CS198
   Score 171; DB
Pred. No. 2.2e
0; Mismatches
  0
  ₹
  protein
   Friedman
Klass MR,
SD;
  DB 4;
.2e-15;
  cancer monitoring;
   #5
   189
   33
  PN, Gordon
Kratochvil
  Length
   Indels
  215;
  មូដ
  0
  Gaps
   0
```

```
RESULT 9
ADN17177
  ននិនិនិនិនិនិ
밁
   ঠ
   Query Match
Best Local S
Matches 32
   diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition of an individual to, diseases and conditions of the gastrointestinal tract, e.g. cancer and in gene therapy. This is the amino acid sequence of a synthetic peptide based on the predicted human CS198 protein sequence derived from the CS198 consensus sequence shown in seq id 27.
   Sequence
   ADN17177
   22-AUG-2003;
   04-MAR-2004
  US2004043406-A1
  Unidentified
   Gastrointestinal tract;
   CS198
  17-JUN-2004
  ADN17177;
   ragments
  Billingel PA,
   (COTA/)
  31-MAR-1997;
  WPI;
  Roberts-Rapp
  (ROBE/
   (KLAS
  (FRIE,
  30-MAR-1998;
   GRAT/
   HAYD,
  GRAN/
  BILL/)
  2004-313754/29.
  157
  protein
   _
  l Similarity
32; Conser
   COLPITTS T L.
FRIEDMAN P N.
GORDON J .
GRANADOS E N.
HAYDEN M A.
HODGES S C.
KLASS M R.
KRATOCHVIL J C.
RUSSELL J C.
STROUPE S D.
   BILLINGEL P
  COHEN M
   215
   EN,
   BDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE
  standard; protein; 215 AA
  EDPVDSAPPGORKKEOWYAGINPSDGINSEVLE
   or complements.
   Conservative
   B
   ŗ,
   2003US-00646873
  (first
   Cohen
Hayden
   97US-00828855.
98US-00050516.
  Russell
   ×
  entry
   $.3
  97.2%;
  - 0
  ជ
   'n,
   Colpitts TL,
Hodges SC,
   The composition and methods are useful
  tract;
   Score 171; DB Pred. No. 2.2e O; Mismatches
   Stroupe
  CS198;
   171;
No. 2.
  Friedman
Klass MR,
SD;
   DB 6;
  cancer;
   189
  33
  PN,
   Length
  gene
   N, Gordon
Kratochvil
   Indels
  therapy.
   215;
   1
1
1
1
1
1
  0;
  Gaps
  ä
   0
```

The invention relates to reagents and methods for detecting distributes gustrointestinal (GI) tract. The method involves detecting presence of target CS198 polynucleotide in the test sample. The and compositions of the present invention are useful for the di

The methods diseases

diagnosis the

prevention

Claim

17;

SEQ

IJ

ö

47;

67pp; English

Diagnosing diseases such as cancer of the detecting aberrant expression or activity

gastrointestinal tract, by of the CS198 polypeptide,

à and

treatment

methods.

밁 S

밁

621

EDPVDSAPPGQRKKEQWYAGINPSDGINSEVLE

.653

```
ARESULT 10
AAW79676
ID 70479676
ID 70479
XX AW79
XX AW79
XX AW79
XX Human
XX Gastr
XW Gastr
XW Human
XX Homo
X
                               δ
  Query Match
Best Local (
  Query Match
Best Local
  Matches
  Matches
   This sequence represents the human CS198 protein which is used in a method to detect the presence of a target CS198 polynuclectide in a test sample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be used in detecting, diagnosing, staying, monitoring, prognosticating, preventing or treating or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oesophagus, gastric ulcer, gastritis, leiomyoma, polyps, Crohn's disease, ulcerative colitis, and
   Gastrointestinal tract; GI tract; cancer; disease; detection; CS19 human; predisposition; treatment; Barret's oesophagus; gastric ulc gastritis; leiomyoma; polyps; Crohn's disease; ulcerative colitis;
  New gastrointestinal polynucleotides, CS198, and their detection for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastritical contents of the content of the cont
   Billing-Medel PA, Cohen M, Colpitts TL,
Granados EN, Hayden M, Hodges SC, Klass
Roberts-Rapp L, Russell JC, Stroupe SD;
   aberrant expression or activity of the CS198 polypeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 protein used to illustrate the method of the
  Sequence 679
   Claim
  31-MAR-1997;
   30-MAR-1998;
  08-OCT-1998.
   WO9844159-A1.
  Homo sapiens
   pancreatitis.
   Human CS198 protein.
  11-JAN-1999
   AAW79676;
  AAW79676 standard; protein;
  Sequence 215
   (ABBO ) ABBOTT
  1998-542714/46
  157
   26;
  32;
   ۲
   н
  Similarity
32; Conser
  Similarity
   EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE
EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE
  EDPVDSAPPGORKKEOWYAGINPSDGINSEVLE 189
   Page 100-102; 127pp; English.
  Conservative
  Conservative
  ğ
  Ŗ
  (first
   LAB.
  97US-00828855
   98WO-US006251
  entry)
  97.2%;
97.0%;
  97.2%;
  679
  0
  Score 171; DE
Pred. No. 2.26
0; Mismatches
  0
  Score 171; DB Pred. No. 7.7e 0; Mismatches
  ₹
  DB 2;
7.7e-15;
1;
  DB 8;
   33
  Friedman PN,
MR, Kratoch
   8
   Length 679;
   Length 215;
  Kratochvil
  Indels
  Indels
  Gordon
  ğ
  gastritis.
  0;
  0
  CS198;
  ulcer;
  Gaps
  Gaps
  ď
   treating,
   used
  0
  0
```

```
RESULT 11
ADEO7319
ADEO7319
ACC ADEO7
ACC ADEO
The invention relates to a method of detecting the presence of a target CC CS 198 polynucleotide comprising contacting the test sample with at least cone CS 198-specific polynucleotide. The method is useful for detecting CC diseases of the gastrointestinal (GI) tract organs, particularly cancer. The CS 198 polynucleotides, polypeptides and antibodies are useful for CC detecting, diagnosing, staging, monitoring, prognosticating, preventing, CC treating or determining predisposition to diseases and conditions of the CC difference of the colitis, pancreatitis and Barret's oesophagus. The CS 198 collegative colitis, pancreatitis and Barret's oesophagus. The CS 198 collegative colitis, pancreatitis or reagents in diagnostic through the components or as target sites for various therapies. Antibodies directed against at least one epitope contained within these CC polypeptides are useful as delivery agents for therapeutic agents, in CC diagnostic tests and for screening for conditions or diseases associated with CS 198, particularly cancer. Monoclonal antibodies may also be used
  Billingel PA, Co
Granados EN, Ha:
Roberts-Rapp L,
  WPI; 200
N-PSDB;
   CS 198; gastrointestinal tract disease; GI tract; cancer; gastric gastritis; Crohn's disease; ulcerative colitis; pancreatitis; Barret's oesophagus; gene therapy; drug screening; human.
  AAE07319
   Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, comprise contacting test sample with at least one CS 198-specific polynucleotide.
  06-NOV-2001
  AAE07319
  (HODG/)
  (GORD/)
   (COLP/)
  30-MAR-1998;
  Misc-difference
   Homo sapiens
   Human CS
   Claim 17; Page 49-51; 68pp; English.
   (KRAT/)
  31-MAR-1997;
   US2001010904-A1
  HAYD
  2001-496163/54.
DB; AAD13637.
  HAYDEN M.
HODGES S C.
KLASS M R.
KRATOCHVIL J
ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
   GORDON J.
GRANADOS E N.
  BILLINGEL P A.
  COLPITTS
   COLPITTS T L.
FRIEDMAN P N.
  COHEN
   198
  standard; protein; 679
   Cohen
Hayden
   protein
  (first entry
   97US-00828855
   98US-00050516
   Location/Qualifiers
  ohen M,
yden M,
Russell
   /note= "Encoded by CGGN"
   r o
  Colpitts TL, Friedman Hodges SC, Klass MR, JC, Stroupe SD;
   B
  PN,
  Kratochvil
  Gordon
   comprises
   ulcer;
```

for the

generation of chimeric antibodies for therapeutic use.

```
RESULT 12
AAM78590
ID AAM78590
AC AAM78590
AC AAM78590
AC AAM78
AC
  밁
   8
   ន្តន្តន្តន្ត្
   Query Match
Best Local S
  Matches
   03-FEB-2000; 2000US-00496914.
27-APR-2000; 2000US-00560875.
20-JUN-2000; 2000US-00598075.
19-JUL-2000; 2000US-00620325.
01-SEP-2000; 2000US-0063936.
15-SEP-2000; 2000US-00693325.
20-OCT-2000; 2000US-00693325.
30-NOV-2000; 2000US-00728422.
   polynucleotide is also useful in gene therapy and drug screeni method of the invention provides an alternative, non-surgical method capable of detecting early stage GI tract disease such The present sequence is human CS 198 polypeptide
   Human; cytokine; cell proliferation; cell differentiation; gene th vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; immunomodulatory; cancer; leukaemia;
The invention relates to polynucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating cytokine, cell proliferation or cell differentiation or which may induc production of other cytokines in other cell populations. The polymucleotides and polypeptides are useful in gene therapy, vaccines o peptide therapy. The polypeptides have various cytokine-like activities e.g. stem cell growth factor activity, immunomodulatory activity and activity, tissus growth factor activity, immunomodulatory activity and activity, inhibin activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and
  09-AUG-2001.
  Human
   06-NOV-2001
  AAM78590 standard;
   Sequence
   05-FEB-2001; 2001WO-US004098
  WO200157190-A2
   Claim 20;
   Nucleic acids encoding
   (HYSE-)
  diagnosis and
   Ą,
   2001-476283/51.
DB; AAK51723.
  621
   sapiens
  protein
   H
  Zhao
  Bystem disorder; arthritis;
   HYSEQ INC.
   Similarity
   Liu C,
hao QA,
Yang Y,
  EDPVDSAPPGQRKKEQWYAGINPSDGINSEVLE
   EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE
   Page
  Conservative
   ξ
  SEQ
   (first
   3512-3514; 6221pp; English
   gene
  Wang
   Drmanac RT,
Wang D, Wang
Wejhrman T,
  ID NO 1252.
  protein;
  entry)
   97.2%;
   g polypeptides with cytokine-like activities, useful
therapy.
  679
  0
   Score 171; DB 4;
Pred. No. 7.7e-15;
0; Mismatches 1
   Asundi V,
J J, Zhang
Goodrich R
  ጅ
   inflammation.
  , R,
  Zhou P,
  653
   ü
  Ren
  Length 679
  '5
  Indels
  ž
  use. The CS 19k
g screening. The
surgical diagnostic
se such as cancer
  chen
  R, Cao
              arthritis and
  0
   activities
  Y;
Wang
  may induce
  Gaps
   therapy;
   Z₩;
  ဝူ
  ţ
  0
```

```
RESULT 13
ADA26379
ID ADA26
XX
밁
   8
  ន្តន្តន្តន
  Matches
   Query Match
Best Local
   CS198; cancer diagnosis; cancer staging; cancer monitoring; cancer prognosticating; cancer prevention; cancer; gastrointestinal tract disorder; gene therapy.
  Sequence
   inflammation. Note: Records for SEQ ID NO 2110 (AAK52581), (AAK52582) and 3666 (AAM80020) are omitted as the relevant sequence listing were missing at the time of publication
  comprises
detecting
   Synthetic;
   Predicted amino
   Billingel PA
Granados EN,
   (COLE/)
   31-MAR-1997;
30-MAR-1998;
   23-OCT-2002;
  US2003082619-A1
  20-NOV-2003
  ADA26379;
  ADA26379
  (FRIE/
   Claim 17;
  Detecting
  WPI; 2003-596961/56.
  Roberts-Rapp
  (KLAS)
  (HODG/
  (HAYD
  (GRAN/
  (STRO,
   (KRAT/
   GORD/
   621
   _
  KLASS M R.
KRATOCHVIL J
ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
  GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
   COHEN M.
COLPITTS
FRIEDMAN
  Similarity
  BILLINGEL P A.
   679
   EDPVDSAPPGQRKKEQWYAGINPSDGINSEVLE
  EDSVDSAPPGORKKEOWYAGINPSDGINSEVLE
   standard;
  PA,
   the presence of a target CS198 polynucleotide in a test sample contacting the sample with a CS198 specific polynucleotide and the presence of the target CS198 polynucleotide in the test
   Page 49-50; 67pp; English
   Conservative
  B
   2002US-00278547.
   , Cohen M,
Hayden MA,
L, Russell
   ŗ
  (first entry
   98US-00050516.
  97US-00828855.
  acid
   77
  protein;
  97.2%;
   ۲ø
   sequence
   Colpitts TL,
Hodges SC,
JC, Stroupe
  679
   0
   Score 171; DB 4;
Pred. No. 7.7e-15;
0; Mismatches 1
   of the
  CS198
   Friedman
Klass MR,
SD;
  d as the relevant of publication
  653
  3
  protein.
   Length
   PN,
   PN, Gordon
Kratochvil
   Indels
  2111
   pages
   0
   Gaps
   from
   the
  0
```

The invention describes a method of detecting the presence of a target CS198 polynucleotide in a test sample. The method comprises contacting the test sample with at least one CS198 specific polynucleotide or its complement, and detecting the presence of the target CS198 polynucleotide in the test sample, where the CS198-specific polynucleotide has at least 50% identity to a polynucleotide having any of the 27 fully defined

0

```
RESULT 14
ADN17172
AD ADN17172
AX ADN17
AX Gasti
AX Gasti
AX ADN17
ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AX ADN17
AD
   밁
  8
  ទំនួទ្ធន្ធន្ធន្ធន្ធន្ធន្ធន្ធន្ធ
  Query Match
Best Local S
Matches 32
  sequences of 34-2894 bp (S1-27) given in the specification, or their fragments or complements. The composition and methods are useful in diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition of an individual to, diseases and conditions of the gastrointestinal tract, e.g. cancer and in gene therapy. This is the predicted amino acid sequence of the human CS198 protein derived from the CS198 consensus sequence shown in seq id 27.
  Billingel
Granados E
   Diagnosing diseases such as cancer of the gastrointestinal tract, detecting aberrant expression or activity of the CS198 polypeptid associated treatment methods.
                     The invention relates to reagents and methods for detecting diseases of the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polynucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis,
  Claim 17;
   GENBANK;
  Roberts-Rapp
  (GORD/)
(GRAN/)
(HAYD/)
(HODG/)
  (COLP/)
   31-MAR-1997;
30-MAR-1998;
   22-AUG-2003;
  04-MAR-2004.
  US2004043406-A1
   Unidentified
   Gastrointestinal
  CS198 protein #1.
  17-JUN-2004
   ADN17172;
  ADN17172 standard; protein; 679 AA
   Sequence 679
  KRAT/
  (KLAS/)
   (FRIE/)
   2004-313754/29.
NK; D87440.
   621
   μ
  1 Similarity 32; Conser
  GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
   RUSSELL
STROUPE
  FRIEDMAN P N.
   ROBERTS-RAPP
  KLASS M R.
KRATOCHVIL J
  COHEN
  BILLINGEL P A.
   EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE
  Z
   PΑ,
   EDPVDSAPPGORKKEOWYAGINPSDGINSEVLE
  SEQ
  Conservative
  ۲
   2003US-00646873
  8
  Hayden MA,
L, Russell
  (first
  ä
   97US-00828855.
98US-00050516.
   SCI
  ö
   tract;
   ۵٥
  42;
  entry)
  97.2%;
   r o
  67pp;
   ពួ
  Colpitts TL,
Hodges SC,
JC, Stroupe
   tract;
  0
  Score 171; DB 6;
Pred. No. 7.7e-15;
0; Mismatches 1
  English
   CS198; cancer; gene therapy.
  Klass
SD;
   Friedman
   653
   ω
u
  ₹,
  PN, Gordon
Kratochvil
  Length
  Indels
  679;
   polypeptide,
  g,
  <u>.</u>
  Gaps
   γğ
  and
```

invention are

expression of

```
RESULT 15
ADX97562
밁
   S
   នន្តន្តន្តន្ត្
  Matches
   Query Match
Best Local
   pancreas and its encoded protein. The invention further comprises:
proteins and peptides, preferably isolated, that contain a sequence
encoded by the novel nucleic acid; and methods for diagnosis and
creatment of pancreatic cancer, using a substance that inhibits or binds
to the protein or its DNA, including: an antisense oligonucleotide, short
interfering RNA or ribozyme directed against the pancreatic protein, an
organic molecule, particularly having a molecular weight below 5000,
especially 300, that binds to the pancreatic DNA, an aptamer or
(monoclonal) antibody, preferably human or humanized, that binds to the
pancreatic DNA, or an anti-idiotypic antibody raised against the
monoclonal antibody, any of which may be derivatized with a reporter
The process of the pancreatic manual of the pancreatic with a reporter
   prevention and/or treatment of diseases or conditions associated water aberrant expression or activity of the CS198 polypeptide, such as of the gastrointestinal tract. These are also useful in gene there present sequence is a CS198 protein used to illustrate the method
  Sequence 679
   ADX97562 standard;
  New nucleic acid differentially use as diagnostic agents and in
   N-PSDB;
   27-OCT-2004.
   Homo sapiens
   pancreas tumor; cytostatic.
  21-APR-2005
           group, cytotoxic compound, immunostimulant and/or radioisotope. human pancreatic proteins and their encoding DNA have cytostatic activity. The novel sequences are useful for inhibiting transcri
  The invention relates to a novel human nucleic acid sequence of the
   Claim 2; SEQ ID NO 110;
   Rosenthal A,
Lichtner R,
   (ROSE/)
  31-MAR-2003; 2003DE-01015834.
  31-MAR-2004; 2004EP-00090124.
  Pancreatic cancer associated
   ADX97562;
  (LICH/)
   (/ZNIH)
   (SPEC/
   (DAHL/)
  2004-768082/76.
DB; ADX97491.
  621
  32;
  _
   DAHL E.
SPECHT T.
  LICHTNER
  HINZMANN B.
  Similarity
   PILARSKY C.
   ROSENTHAL
  EDPVDSAPPGORKKEOWYAGINPSDGINSEVLE
  EDSVDSAPPGORKKEOWYAGINPSDGINSEVLE 33
  Conservative
   Pilarsky C, Dahl E
Staub E, Roepcke S,
   8
  (first entry)
  æ
  Þ
   protein; 692
   97.2%;
  28pp; German.
   Dahl E,
  0,
   Score
Pred.
  human
   expressed
   Mismatches
   ₽
  Specht
Li X;
   171; DB 8;
No. 7.7e-15;
  protein,
   in pancreatic tumor tissue, for therapeutic agents.
   Ή
  653
   SEQ
  Bruemmendorf
   Ü
  Length
   Indels
  in gene therapy. Th
  associated with
   679
               transcription
  ٥.
   Gaps
   The novel
   cancer
   short
   for
   0
```

```
CC cancer. This sequence represents one of the novel human pancreatic CC proteins of the invention. Note: This sequence is not shown in the CC specification, it has been electronically downloaded from a DVD-rom CC provided with this specification by the European Patent Office.

XX Sequence 692 AA;

Query Match 97.2%; Score 171; DB 8; Length 692; Best Local Similarity 97.0%; Pred. No. 7.9e-15; Matches 32; Conservative 0; Mismatches 1; Indels 0; Gaps 0; Matches 32; Conservative 0; Mismatches 1; Indels 0; Gaps 0; Gaps CONSERVED CONSERVED CONSERVE GOVERNOUS AND CONSERVE G
```

inis Page Blank (USP)o)

```
OM protein - protein search, using sw model
  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
   Minimum DB seq length: 0
Maximum DB seq length: 200000000
   Scoring table:
  Title:
Perfect score:
   Total number of hits satisfying chosen parameters:
   Searched:
  Database :
  9::
pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed,
  BLOSUM62
Gapop 10.0 , Gapext 0.5
  US-10-646-873-46
176
  March
   283416 seqs, 96216763 residues
   PIR 80:*
   EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
  GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
  pir3:*
  pir2:*
   pir4:*
  3, 2006, 13:26:31 ; Search time 2.08455 Seconds (without alignments)
1523.185 Million cell updates/sec
  283416
```

and is derived by analysis of the total score distribution.

#### SUMMARIES

| 22222<br>9876                                                      | 18<br>20<br>22<br>23<br>24                                                                                                           | 110<br>110<br>111<br>111<br>111<br>111<br>111<br>111<br>111                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Result           |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
|                                                                    | . 44444                                                                                                                              | 171<br>55.55<br>54.55<br>54.55<br>51.55<br>51.55<br>51.55<br>49.50<br>49.50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Score            |
| 27.6<br>27.6<br>27.6                                               | 27.8<br>27.8<br>27.8<br>27.8<br>27.8                                                                                                 | 97.2<br>31.8<br>31.5<br>31.5<br>31.0<br>31.0<br>30.7<br>30.7<br>29.3<br>29.3<br>29.3<br>29.3<br>29.3<br>29.3<br>27.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Query<br>Match 1 |
| 1420<br>120<br>10                                                  | 35<br>484<br>695<br>770<br>259                                                                                                       | 679<br>523<br>1311<br>1916<br>1775<br>227<br>2980<br>2090<br>2329<br>329<br>329<br>329<br>329<br>329<br>329                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Length I         |
| เลย<br>เลย<br>เลย<br>เลย<br>เลย<br>เลย<br>เลย<br>เลย<br>เลย<br>เลย |                                                                                                                                      | 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | DB ID            |
| E70910<br>T27938<br>AG3057<br>G98228<br>S40503                     | JN0041<br>T34708<br>A32761<br>A49795<br>S00550<br>GRHUA4<br>G87083                                                                   | T00636 A41648 A41648 A41484 A431893 A31893 A31893 T106613 T00613 A11671 |                  |
|                                                                    |                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <br>             |
|                                                                    | glutamate-ammonia hypothetical prote hypothetical Alzhe Alzheimer's diseas Alzheimer's diseas Alzheimer's diseas Alzheimer'ra diseas | hypothetical prote protein-tyrosine-p hypothetical prote 2'-5' RNA ligase (collagen alpha 1(I hypothetical prote hypothetical prote hypothetical prote 2-C-methyl-D-eryth phosphoesterase-re alcohol dehydrogen glycerone kinase (Alzheimer's diseas 1-aminocyclopropan Ig heavy chain v rranscription regu hypothetical prote alcohol dehydrogen                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Description      |

A;Description: catalyzes the hydrolysis of peptidyl-phosphotyrosine to release phosphat.

| 45                | 44                 | 43                 | 42                 | 41                 | 40                | 39                | 38                 | 37                | 36                 | 35                 | 34     | 33                 | 32                | 31                 | 30                 |
|-------------------|--------------------|--------------------|--------------------|--------------------|-------------------|-------------------|--------------------|-------------------|--------------------|--------------------|--------|--------------------|-------------------|--------------------|--------------------|
| 47                | 47                 | 47                 | 47.5               | 47.5               | 48                | 48                | 48                 | 48                | 48                 | 48                 | 48     | 48                 | 48                | 48                 | 48                 |
| 26.7              | 26.7               | 26.7               | 27.0               | 27.0               | 27.3              | 27.3              | 27.3               | 27.3              | 27.3               | 27.3               | 27.3   | 27.3               | 27.3              | 27.3               | 27.3               |
| 356               | 333                | 97                 | 634                | 210                | 972               | 863               | 681                | 546               | 535                | 535                | 408    | 330                | 315               | 290                | 113                |
| _                 | N                  | N                  | N                  | N                  | N                 | N                 | ν                  | N                 | N                  | ب                  | N      | Ν                  | ۲                 | N                  | N                  |
| AJAAQ             | C37145             | PH1155             | T27465             | JH0794             | 835521            | T49709            | T01469             | S67292            | C24187             | WMBEW1             | S51467 | D95879             | AJYLNB            | B29550             | 855535             |
| giutamate-ammonia | probable nelvetici | Ig heavy chain v r | hypothetical proce | gamma-aminobutyric | DNA topoisomerase | related to glucan | hypothetical proce | probable membrane | hypothetical proce | ULZI protein - num | pr     | probable dinydroxy | grutamace-ammonia | hypothetical proce | Ig heavy chain V r |

## ALIGNMENTS

```
R;Lamerdin, J.B.; McCready, P.M.; Skowronski, B.; Adamson, A.W.; Burkhart-Schultz, K.; Crgescu, A.; Avila, J.; Liu, S.; Bruce, R.; Quan, G.; Montgomery, M.; Ow, D.; Nolan, M.; submitted to the EMBL Data Library, January 1998
A;Description: Sequence analysis of a 3.5 Mb contig in 19p13.3 between CDC34 and D19S34.
   hypothetical protein F21856_2 - human
C;Species: Homo sapiens (man)
C;Date: 01-Feb-1999 #sequence_revision 01-Feb-1999 #text_change 09-Jul-2004
   A; Reference number: Z14195
A; Accession: T00636
   R;Galaktionov, K.; Beach, D. Cell 67, 1881-1994
Cell 67, 1181-1194, 1991
A;Title: Specific activation of cdc25 tyrosine phosphatases by B-type cyclins: evidence
A;Reference number: A41648; MUID:92103683; PMID:1836978
   protein-tyrosine-phosphatase (EC 3.1.3.48) cdc25A - human
N;Alternate names: cell division cycle protein cdc25A
C;Species: Homo sapiens (man)
C;Date: 28-May 1992 #sequence_revision 25-Apr-1997 #text_change 09-Jul-2004
  片
  S
  A; Molecule type: DNA
A; Residues: 1-679 < LAM>
   A;Molecule type: mRNA
A;Residues: 1-523 <GAL>
A;Crooss-references: UNIPROT:P30304; UNIPARC:UPI0000038993; GB:M81933; NID:g180170; PIDN
C;Comment: This protein can be activated by association with cyclin B.
   A; Note: F21856_2
   A;Map position: 19p13.3
A;Introns: 594/1; 637/3; 650/3
  A;Cross-references: UNIPROT:Q8IVT2; UNIPARC:UPI00000745CD; EMBL:AC004030; NID:g2804590;
   A;Status: preliminary; translated from GB/EMBL/DDBJ
   T00636
A; Map position:
                         A;Cross-references: GDB:133773; OMIM:116947
  C;Genetics
   A;Accession: A41648
   C;Accession: A41648
   Accession: T00636
  Query Match
  Matches
   Local Similarity
   621
   32;
3p21.3-3p21.2
  Conservative
   97.2%;
  Score 171; DB 2;
Pred. No. 9.3e-16;
0; Mismatches 1
   Length 679;
   Indels
  0;
   Gaps
  .0
```

```
A;Pathway: initiation of mitosis
A;Note: cdc25 activates the cdc2 protein kinase by dephosphorylating it
C;Superfamily: human protein-tyrosine-phosphatase cdc25A; cdc25-type protein-tyrosine-ph
C;Keywords: cell cycle control; mitosis; phosphoprotein; phosphoric monoester hydrolase;
F;312-505/Domain: cdc25-type protein-tyrosine-phosphatase homology <PTP>
F;430/Active site: Cys (phosphorysteine intermediate) #status predicted
F;436/Binding site: substrate phosphate (Arg) #status predicted
   A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-1311 <BEV>
A;Cross-references: UNIPROT:Q9SZW3; UNIPARC:UPI00000AA8E7; EMBL:AL078464; GSPDB:GN00062;
A;Experimental source: cultivar Columbia; BAC clone F6G3
ફ
  A;Molecule type: DNA
A;Residues: 1-196 <KUR>
A;Cross-references: UNIPROT:Q8YEL6; UNIPARC:UPI0000058229; GB:AE008917;
A;Experimental source: strain 16M
  R;DelVecchio, V.G.; Kapatral, V.; Redkar, R.J.; Patra, G.; Mujer, C.; Los, T.; Ivanova, ; Mazur, M.; Goltsman, E.; Selkov, E.; Elzer, P.H.; Hagius, S.; O'Callaghan, D.; Letess Proc. Natl. Acad. Sci. U.S.A. 99, 443-448, 2002
A;Title: The genome sequence of the facultative intracellular pathogen Brucella melitens A;Reference number: AD3252; PMID:11756688
A;Accession: AH3484
  2'-5' RNA ligase (EC 6.5.1.-) [imported] - Brucella melitensis (strain 16M)
C;Species: Brucella melitensis
C;Date: 01-Feb-2002 #sequence_revision 01-Feb-2002 #text_change 12-Jul-2004
  밁
   Ş
  A;Map position: 4
A;Introns: 414/1; 474/1; 506/1; 547/2; 591/3; 1179/3
   A;Reference number: Z16520
A;Accession: T08986
  R;Bevan, M.; Murphy, G.; Ridley, P.; Hudson, S.; Bancroft, I.; Mewes, H.W.; Mayer, submitted to the Protein Sequence Database, May 1999
  C; Date: 11-Jun-1999
C; Accession: T08986
   문
   ঠ
   hypothetical protein F6G3.130 - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
  A;Status: preliminary
  ;Map position: I
;Superfamily: 2'-5'
;Keywords: ligase
  Gene: ATSP:F6G3.130
   Accession: AH3484
  Matches
   Gene: BMEI1862
  Genetics
   Matches
  Query Match
  Matches
   Query Match
   Query Match
  Local Similarity
   Local
  1276
   276
  10
   12;
  ۲
  μ
   Similarity
9; Conserv
   Similarity
  GQRKKEQWYAGINPSDGINS 29
  ENSVDDSDPPGDRYRDAWQHGI 1297
  EDSV-DSAPPGQRKKEQWYAGI 21
   ERSQEESPPGSTKRRKSMSGASPKESTNPE
  EDSVDSAPPGQRKKEQWYAGINPSDGINSE 30
  Conservative
   Conservative
  Conservative
  #sequence_revision 11-Jun-1999 #text_change 09-Jul-2004
   RNA ligase, prokaryotic LigT
  31.5%;
   31.8%;
  31.2%;
45.0%;
   3; Mismatches
  Score 55.5;
Pred. No. 25
   Score 56; DB 1;
Pred. No. 7.6;
7; Mismatches 1
  Score 55;
Pred. No.
  5; Mismatches
  дв
3.5;
   DB 2;
   2
  13;
  6;
   6,
   Length 523;
   Length 196;
   Length 1311;
  Indels
   Indels
  Indels
  0;
   1;
  0
  Gaps
   Gaps
  Gaps
  PIDN: AAL53043.1
   1;
  0
  0
   K. F.
```

```
A; Creme: FlyBase: FlyBase: FBgn0000299
A;Introns: 7/2; 23/3; 339/3; 505/2; 989/1; 1312/1; 1689/3
A;Introns: 7/2; 23/3; 339/3; 505/2; 989/1; 1312/1; 1689/3
C; Superfamily: collagen alpha 1(IV) chain
C; Keywords: basement membrane; cell binding; coiled coil; disulfide bond; duplication; e
F;1-23/Domain: signal sequence #status predicted <SIG>F;24-175/Product: collagen alpha 1(IV) chain #status predicted <MAT>
F;65-67/Region: cell attachment (R-G-D) motif
F;130-132/Region: cell attachment (R-G-D) motif
F;238-240/Region: cell attachment (R-G-D) motif
F;297-299/Region: cell attachment (R-G-D) motif
F;1075-1077/Region: cell attachment (R-G-D) motif
F;125-1227/Region: cell attachment (R-G-D) motif
F;125-1227/Region: cell attachment (R-G-D) motif
F;125-1227/Region: cell attachment (R-G-D) motif
F;1545-175/Domain: cell attachment (R-G-D) motif
F;1545-175/Domain: cell attachment (R-G-D) motif
F;1545-1655/Domain: cell attachment (R-G-D) motif
F;1545-1655/Domain: repeat NC1 #status predicted <NC1>
F;72/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;70,573/Disulfide bonds: interchain #status predicted
  A; Molecule type: mRNA
A; Residues: 1065-1775 &BLU2>
A; Cross-references: UNIPARC: UPI00001773AF; EMBL: J02727
R; Monson, J.M.; Natzle, J.; Friedman, J.; McCarthy, B.J.
Proc. Natl. Acad. Sci. U.S.A. 79, 1761-1765, 1982
A; Title: Expression and novel structure of a collagen gene
A; Reference number: A19442; MUID: 82197577; PMID: 6210912
A; Accession: A19442
   A;Molecule type: mRNA
A;Residues: 1-1775 <BLU>
A;Residues: 1-1775 <BLU>
A;Cross-references: UNIPROT:PO8120; UNIPARC:UPI0000126D1C; EMBL:M23704;
R;Blumberg, B.; MacKrell, A.J.; Olson, P.F.; Kurkinen, M.; Monson, J.M.
J. Biol. Chem. 262, 5947-5950, 1987
A;Title: Basement membrane procollagen IV and its specialized carboxyl
A;Reference number: A26692; MUID:87194801; PMID:3106346
A;Accession: A26692
  C;Species: Drosophila melanogaster
C;Date: 21-May-1990 #sequence revision 21-May-1990 #text_change 09-Jul-2004
C;Accession: A31893; A26692; Ā19442; S00020
R;Blumberg, B:; MacKrell, A.J.; Fessler, J.H.
J. Biol. Chem. 263, 18328-18337, 1988
A;Title: Drosophila basement membrane procollagen alpha-1(IV). II. Complete A;Reference number: A31893; MUID:89054012; PMID:3142875
A;Accession: A31893
  F;570,573/Disulfide bonds: #status F;1611-1617,1720-1727/Disulfide bonds: #status
   A;Accession: S00020
A;Molecule type: DNA
A;Residues: 1355-1356,'K',1358-1359,'K',1361-1372,'I',1374-1495,'R',1497-1506,'RA',1509,
A;Cross-references: UNIPARC:UPI00001773B0; EMBL:M28334
   R;Cecchini, J.P.; Knibiehler, B.; Mirre, C.; le Parco, Y.
Eur. J. Biochem. 165, 587-593, 1987
A;Title: Evidence for a type-IV-related collagen in Drosophila melanogaster.
A;Reference number: S00020; MUID:87246644; PMID:3109906
  A;Molecule type: DNA
A;Residues: 762-947,'S',949-996,'T',998-1230 <MON>
A;Residues: 762-947,'S',949-996,'T',998-1230 <MON>
A;Cross-references: UNIPARC:UPI0000168B4B; GB:J01074; EMBL:V00200; NID:g7736; PIDN:CAA23
A;Cross-references: UNIPARC:UPI000016BB4B; GB:J01074; EMBL:V00200; NID:g7736; PIDN:CAA23
   collagen alpha 1(IV) chain precursor -
C;Species: Drosophila melanogaster
Ś
  밁
   A;Gene: FlyBase:Cg25C
  C;Genetics:
   RESULT
  Local
  77
       6 SAPPGORKKEOWYAGINPSDGINSE 30
  Similarity
  GSKKPHSIYAGVSPSPGLNT 96
  31.0%;
  Score 54.5;
Pred. No. 4
   Mismatches
  fruit fly (Drosophila melanogaster)
  48;
   DB 2;
   predicted
   7;
   Length 1775;
   EMBL:M23704; NID:g157029; PIDN Monson, J.M.; Natzle, J.E.; F
   in Drosophila
  II. Complete cDNA sequence
   1;
   Gaps
  domain are
  Evolutionar
   1:
```

밁

1101

```
밁
  8
   A,Status: preliminary; nucleic acid sequence not shown; translation A,Molecule type: DNA A,Residues: 1-227 <KLE>
  A;Title: The complete genome sequence of the hyperthermophilic, A;Reference number: A69250; MUID:98049343; PMID:9389475 A;Accession: H69453
   Nature 390, 364-370, 1997
A;Authors: Utterback, T.; Cotton, M.D.; Spriggs, T.; Artiach, P.; Kaine, B.P.; Sykes, Smith, H.O.; Woese, C.R.; Venter, J.C.
  A;Cross-references: UNIPROT:028640; UNIPARC:UPI0000056C3B; GB:AE000989; GB:AE000782;
  R;Klenk, H.P.; Clayton, R.A.; Tomb, J.F.; White, O.; Nelson, K.E.; Ketchum, K.A.; ., Fleischmann, R.D.; Quackenbush, J.; Lee, N.H.; Sutton, G.G.; Gill, S.; Kirkness
  A; Reference number: Z14192
   R;Rounsley, S.D.; Lin, X.; Ketchum, K.A.; Crosby, M.L.; Brandon, submitted to the EMBL Data Library, June 1998
A;Description: Arabidopsis thaliana chromosome II BAC T8K22 genor
  N;Alternate names: hypothetical protein T8K22.20
C;Species: Arabidopsis thallana (mouse-ear cress)
C;Date: 01-Feb-1999 #sequence_revision 01-Feb-1999
C;Accession: T00613; D84437
   밁
   र्
  C;Date: 02-Jun-2000 #sequence_revision 02-Jun-2000 #text_change 09-Jul-2004 C;Accession: T49570 R;Schulte, U.; Aign, V.; Hoheisel, J.; Brandt, P.; Fartmann, B.; Holland, R submitted to the Protein Sequence Database, May 2000
   Query Match
Best Local S
Matches 9
   ypothetical
  ypothetical protein B208.180 [imported] - Neurospora crassa
  Accession: H69453
   Query Match
Best Local
  C-methyl-D-erythritol 4-phosphate cytidylyltransferase
  Map position: 6
   Experimental source: BAC
   Residues: 1-980 <SCH>
  Molecule type: DNA
  Accession: T49570
   Reference number: Z25022
  Species: Neurospora crassa
                       Accession: T00613
   Status: preliminary
  Cross-references: UNIPROT: Q96U31; UNIPARC: UPI000017B4A1; EMBL: AL355930;
  Fleischmann, R.D.; Quackenbush, J.; Lee, N.H.;
  position:
  A.; Zhou, L.; Overbeek, R.; Gocayne, J.D.; Weidman, J.F.; McDonald, 90, 364-370, 1997
  124
   152
translated from GB/EMBL/DDBJ
  17
   σ
  9
   Similarity .9; Conserv
   Similarity
  YFAGINPADNLNLEV 138
  WYAGINPSDGINSEV
   SSPPSTVTPEEWYSGIAP 169
   SAPPGORKKEOWYAGINP 23
   Conservative
  30.7%;
   30.7%;
   clone B2O8; strain OR74A
   4
   Score 54;
Pred. No.
   ű
  Pred.
  Score 54; DB
Pred. No. 29;
   Mismatches
   Mismatches
   DB 2;
   BB
   2
   2
   9
   #text_change 17-Mar-2003
   Length 227;
   Length 980;
   Indels
   Indels
  OB)
   genomic sequence
  2.7.7.60) -
   Holland, R.; Nyakatura
   <u>,</u>
   R.C.; Sykeв,
   0,
  not
  Arabidopsis
  Kirkness,
  GSPDB:GN00116
   0
   S.M.;
   archaec
  Dodson
  M
   Kau
   ï
  th
   တ
   밁
      D.; Jones, L.M.; Karst, U.
Science 294, 849-852, 2001
A;Authors: Kreft, J.; Kuhn, M.; Kunst, F.; Kurapkat, G.; Madueno,
A;Authors: N.; Tierrez, A.; Vazquez-Boland, J.
  S
  alcohol dehydrogenase homolog lmo0773 [imported] - Listeria monocytogenes (strain C;Species: Listeria monocytogenes C;Date: 27-Nov-2001 #sequence_revision 27-Nov-2001 #text_change 09-Jul-2004 C;Accession: AE1171
  S
  片
   R;Glaser, P.;
  Accession: AE117
```

Dominguez-Bernal, G.;

Frangeul, L.; Buchrieser, C.; Amend, Bernal, G.; Duchaud, E.; Durand, L.;

Dussurget, A.; Baquero, F Dussurget, O.;

F.; Berche, ; Entian, K.

K.D.; . .

; Bloecke, Fsihi, H

. P. ;

Vовв, Maitournam,

genomics of

```
A;Experimental source: cultivar Columbia
R;Lin, X:; Kaul, S.; Roumsley, S.D.; Shea, T.P.; Benito, M.I.; Town, C.D.; Fujii, C.Y.
M.; Koo, H.; Moffat, K.S.; Cronin, L.A.; Shen, M.; Vanaken, S.E.; Umayam, L.; Tallon,
euss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter,
  R;Murphy, L.; Harris, D.; Bentley, S.D.; submitted to the EMBL Data Library, April A;Reference number: Z21597
A;Accession: T36691
   C; Accessic
R; Murphy,
  A;Introns: 54/1; 86/3; 91/3; 115/3; 165/3; 191/3; 214/3; C;Superfamily: 4-diphosphocytidyl-2-methyl-D-erythritol (C;Keywords: nucleotidyltransferase
  A; Cross-references: UNIPARC: UPI0000178FBF;
   A; Molecule type: DNA
A; Residues: 1-278 <STO>
  A; Reference number: A84420; A; Accession: D84437
   A;Title:
   Nature
   A;Cross-references: UNIPARC:UPI0000178FBF; EMBL:AC004136; NID:g3184270; PID:g3184289
  A;Cross-references: UNIPROT:09X935; UNIPARC:UPI00000DB024; A;Experimental source: strain A3(2) C;Comment: Although this sequence has motifs characteristic
  phosphoesterase-related protein SCH66.03 [similarity] - Streptomyces C;Species: Streptomyces coelicolor C;Date: 03-Aug-2001 #sequence_revision 03-Aug-2001 #text_change 05-Oc C;Date: 03-Aug-2001 #sequence_revision 03-Aug-2001 #text_change 05-Oc C;Date: 
   A;Status: preliminary
   A;Residues: 1-278 <ROU>
   A; Map position:
  F;48-115/Domain: phosphoesterase
   A;Residues: 1-309 <MUR>
  A; Molecule type: DNA
  A;Status: translated from GB/EMBL/DDBJ
  Query Match
Best Local S
Matches 12
   Gene: At2g02500; T8K22.20
   Gene: SCOEDB:SCH66.03
  Query Match
  Accession: T36691
   402, 761-768, 1999
   Local Similarity
  Sequence and analysis of chromosome 2 of the plant Arabidopsis thaliana.
   140
6
  10 GORKKEOW---YAGINPSDGINS
  1 EDSVD----SAPPGORKKEOWYAGINPSDGINSEVL
   Similarity
   EESIDVDLRFAIPGKERQDSVYSGLQEID-VNSELV 174
GORKKORWLRSLAGLRPDFVINT
   phosphoesterase, YkuB type; phosphoesterase core homology
  Conservative
   Conservative
  sequence has motifs characteristic of a variety of phosphoeste
   29.3%;
   29.3%;
  11;
   core
   Score 51.5;
Pred. No. 16
  Score 51.5;
   Pred.
   Mismatches
   Mismatches
    82
  29
   homology
   ŏ.
  Parkhill,
  GB:AE002093; NID:g3184289; PIDN:AAC18936.1;
   18
  BB
   BB
   <PEC>
  ۲,
   2
  J.; Barrell,
  8
   5
   Length
  Length
  ; 230/2; : synthase
   EMBL:AL049731; PIDN:CAB41730
  Town, C.D.; Fujii, C.Y.;
  B.G.; Rajandream,
   5
   Gaps
   2
   1;
  м. А
  ດ
```

```
A;Cross-references: UNIPROT:P12023; UNIPARC:UPI0000151C70; A;Experimental source: brain R;de Strooper, B.; van Leuven, F.; van den Berghe, H. Biochim. Biophys. Acta 1129, 141-143, 1991
A;Title: The amyloid beta protein precursor or proteinase n. A;Reference number: S19727; MUID:92096458; PMID:1756177
A;Accession: S19727
  Alzheimer's disease amyloid beta/A4 protein homolog precursor - mouse ... N;Alternate names: proteinase nexin II C;Species: Mus musculus (house mouse) C;Date: 31-Mar-1989 #sequence revision 31-Mar-1989 #text_change 09-Jul-2004 C;Accession: A27485; S19727; T49485 R;Yamada, T.; Goto, I.; Sakaki, Y. R;Yamada, T.; Sasaki, H.; Furnya, H.; Miyata, T.; Goto, I.; Sakaki, Y. Biochem. Biophys. Res. Commun. 149, 665-671, 1987 A;Title: Complementary DNA for the mouse homolog of the human amyloid beta A;Reference number: A27485; MUID:88106489; PMID:3322280
   R;Parkhill, J.; Wren, B.W.; Thomson, N.R.; Titball, R.W.; Holden, M.T.G.; Prent deno-Tarraga, A.M.; Chillingworth, T.; Cronin, A.; Davies, R.M.; Davis, P.; Dovil, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; Whitehead, S.; Nature 413, 523-527, 2001
  A; Bolecule type: DNA
A;Molecule type: DNA
A;Residues: 1-329 <GLA>
A;Cross-references: UNIPROT:Q8Y8W9; UNIPARC:UPI0000054D36; GB:NC_003210; PIDN:CAC98851.
  밁
  á
  A;Gene: dnak
C;Keywords: phosphotransferase
   A;Cross-references: UNIPROT:Q8ZBQ7; UNIPARC:UPI00000CDA05; GB:AL590842; C;Genetics:
   glycerone kinase
C;Species: Yersir
C;Date: 02-Nov-20
   밁
   á
  A;Reference number: AB1077; MUID:21537279; PMID:11679669
A;Accession: AE1171
A; Molecule type: mRNA
A; Residues: 1-210, 'G', 212-220, 'S', 222-396, 'A', 398-402, 'T', 404-448, 'A', 450-695
  A; Molecule type: mRNA
A; Residues: 1-695 < YAM>
   A; Molecule type: DNA
A; Residues: 1-333 < KUR>
  A;Title: Genome sequence of Yersinia pestis, the causative agent of plague. A;Reference number: AB0001; MUID:21470413; PMID:11586360 A;Accession: AH0406
  RESULT 11
   A;Status: preliminary
   A;Accession: A27485
  A;Status: preliminary
   lycerone kinase (EC 2.7.1.29) [imported] - Yersinia pestis (strain CO92)
Species: Yersinia pestis
Date: 02-Nov-2001 #sequence_revision 02-Nov-2001 #text_change 09-Jul-2004
   ;Superfamily:
  Query Match
Best Local
  Gene: lmo0773
  Query Match
  Accession: AH0406
   Matches
   Matches
   22
  10;
   2 DSVDSAPPGQRKKEQWYAG
   Similarity
  Similarity
  EDSVDSAPPGORKKEOWYAGINPSDGI 27
   DDVASAPPSEREKRRGVAG
   ETTIDNLPENEVTIEVHYSGINYKDGL 48
   alcohol dehydrogenase; long-chain alcohol dehydrogenase homology
  Wren, B.W.; Thomson, N.R.; Titball, R.W.; Holden, M.T.G.; Prentice, M.B. M.; Chillingworth, T.; Cronin, A.; Davies, R.M.; Davis, P.; Dougan, G.;
   Conservative
  Conservative
  29.0%;
52.6%;
  29.0%;
37.0%;
   ω
--
   Score 51;
Pred. No. :
   6; Mismatches
   Score 51; DB
Pred. No. 23;
   153
   20
   Mismatches
  EG.
  DB
   2;
   2;
  11;
   6;
   Length 333;
   Length 329;
  Indels
   nexin
  GB:M18373;
  H
   0
  0
  from
   NID:g191568;
  mouse
   PIDN: CAC92580.1
  protein
  0
   0
       <STR>
  is closer
   Barrell,
  precu
   PIDN
                       R;Dildrop, R.; Bovens, J.; Siekevitz, M.; Beyreuther, K.; Ra:
EMBO J. 3, 517-523, 1984
A;Title: A V region determinant (idiotope) expressed at high
A;Reference number: A91000; MUID:84182519; PMID:6201362
A;Accession: A02037
A;Molecule type: protein
A;Residues: 1-120 cUIL-
A;Cross-references: UNIPROT:P06329; UNIPARC:UPI0000028A6B
A;Cross-references: UNIPROT:P06329; UNIPARC:UPI0000028A6B
C;Kuywords: heterotetramer; immunoglobulin
C;Kuywords: heterotetramer; immunoglobulin
F;1-98/Region: V segment
  RESULT
JC7730
   Ig heavy chain V region (AC38 15.3) - mouse (tentative sequence) C;Species: Mus musculius (house mouse) C;Decies: Mous musculius (house mouse) C;Date: 30-Jun-1987 #sequence_revision 30-Jun-1987 #text_change 09-Jul-2004 C;Accession: A02037
   片
  S
   밁
  S
   MHMS15
  13
```

immunoglobulin homology < IMM:

homology

expressed at high frequency in B lymphocytes PMID:6201362

K.; Rajewsky,

```
Gene 112, 189-195, 1992
A;Title: Positive and negative regulatory (
A;Reference number: 149485; MUID:92209998;
A;Accession: 149485
A;Status: translated from GB/EMBL/DDBJ
   A;Molecule type: protein
A;Roslidues: 28-60;215-242;243-273;341-363;391-402 <KA2>
A;Reslidues: 28-60;215-242;243-273;341-363;391-402 <KA2>
A;Cross-references: UNIPARC:UPI000017CBAD; UNIPARC:UPI000017CBAE; UNIPARC:UPI000017CBAF;
C;Comment: This enzyme, which is related to subgrouup 1 of aminotransferase, is responsif C;Keywords: carbon-sulfur lyase
   R;Kakuta, Y.; Igarashi, T.; Murakami, T.; Ito, H.; Matsui, H.; Honma, Biosci. Biotechnol. Biochem. 65, 1511-1518, 2001
A;Title: 1-Aminocyclopropane-1-carboxylate synthase of Penicillium cit A;Reference number: JC7730; MUID:21406359; PMID:11515533
A;Accession: JC7730
A;Molecule type: mRNA
A;Residues: 1-431 <KAK>
  A;Cross-references: UNIPROT:Q9P963; UNIPARC:UPI000006C5FE; A;Experimental source: strain AHU8443 A;Accession: PC7177
  A;Map position: 16C3
C;Superfamily: Alzheimer's disease amyloid beta protein; animal Kunitz-type proteinase
C;Keywords: alternative splicing; amyloid; transmembrane protein
   A;Cross-references: UNIPARC:UPI000002A2F9; EMBL:X59379 R;Izumi, R.; Yamada, T.; Yoshikai, S.; Sasaki, H.; Hati
   C;Date: 14-Dec-2001 #sequence_revision 14-Dec-2001 #text_change 09-Jul-2004 C;Accession: JC7730; PC7177
  A; Molecule type: DNA
A; Residues: 1-19 < RES>
  C; Species: Penicillium citrinum
   1-aminocyclopropane-1-carboxylate synthase (EC 4.4.1.14) - Penicillium citrinum
  ;Cross-references: UNIPARC:UPI00000003B7; GB:D10603; NID:g220328;
   Genetics:
   Matches
   Matches
   Query Match
   Local Similarity hes 12; Conserv
  11
   1 EDSVDSA---PPGQRKKEQWYAGINPSDGINSEVLE 33
   2 DSVDSAPPGORKKEOWYAGINP--SDGINSEVLE 33
   Similarity
  DSVDSADAEEDDSDVWWVGADTDYADGGEDKVVE
QDVVDAGSENPMWDVMKDTWHASTNPTGYVNVGVAE 46
   Conservative
   Conservative
   28.4%;
  28.1%;
33.3%;
   6
   Score 50; DB
Pred. No. 72;
7; Mismatches
  Score 49.5;
Pred. No. 5
  Mismatches
   elements for the 
; PMID:1555768
  50;
   DB 2;
   H.; Hattori,
  2
   15;
   13;
  Length 695;
  Length 431;
   Indels
   Indels
   expression of
  DDBJ:AB038512
  3
   Sakaki,
   3
7
   2
   citrinum:
  PIDN: BAA01456.1;
   Gaps
  the
   ۲
   Primary
   1:
  Alzheimer's
  PID:
   8tr
```

```
밁
   ş
   F;99-105/Region: D segment
F;106-120/Region: J segment
F;22-96/Disulfide bonds: #status predicted
   R;Nierman, W.C.; Feldblyum, T.V.; Paulsen, I.T.; Nelson, K.E.; Eisen, J.; Heidelberg, J. B.; Laub, M.T.; DeBoy, R.T.; Dodson, R.J.; Durkin, A.S.; Gwinn, M.L.; Haft, D.H.; Kolon n, J.; Ermolaeva, M.; White, O.; Salzberg, S.L.; Shapiro, L.; Venter, J.C.; Fraser, C.M. Proc. Natl. Acad. Sci. U.S.A. 98, 4136-4141, 2001
A;Title: Complete Genome Sequence of Caulobacter crescentus.
A;Reference number: A87249; MUID:21173698; PMID:11259647
A;Accession: B87440
  밁
   ક
   C;Genetics:
A;Gene: CC1539
Search completed: March Job time: 4.08455 secs
  transcription regulator, TetR family [imported] - Caulobacter crescentus
C;Species: Caulobacter crescentus
C;Date: 20-Apr-2001 #sequence_revision 20-Apr-2001 #text_change 09-Jul-2004
  ;Molecule type: DNA
;Residues: 1-224 <5TO>
;Cross-references: UNIPROT:Q9A825; UNIPARC:UPI00000C740A; GB:AE005673; NID:g13422922;
   Query Match
Best Local Similarity
Matches 10; Conserv
  Accession:
  Query Match 27.8%; Score 49; DB 2; Length 224; Best Local Similarity 56.2%; Pred. No. 28; Matches 9; Conservative 2; Mismatches 5; Indels
  Statue: preliminary
  175 EAWAAGIEDSDGMDDE 190
  15 EQWYAGINPSDGINSE 30
  41 PGOGL--EWIGGINPSNG 56
  9 PGORKKEOWYAGINPSDG 26
   Conservative
   27.8%; Score 49; DB 1; Length 120; 55.6%; Pred. No. 14; 111ve 2; Mismatches 4; Indels
                           3, 2006, 13:36:36
   2; Gaps
  0; Gaps
  1.
   0,
```

Control of sing

```
Title:
Perfect score:
   OM protein - protein search, using sw model
   Result
No.
  Scoring table:
  Sequence:
   Run on:
  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
  Database
  Minimum DB seq length: 0
Maximum DB seq length: 200000000
  Total number of hits satisfying chosen parameters:
   Searched:
   31224
31224
31224
31224
31224
31224
31224
31224
   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
  171
123.5
59.5
58
56
56
   Score
  BLOSUM62
Gapop 10.0 , Gapext 0.5
  March
   US-10-646-873-46
176
   UniProt_05.80:*
1: uniprot_sprot:*
2: uniprot_trembl:*
  2166443 segs, 705528306 residues
   1 EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
  GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
  3, 2006, 13:19:17; Search time 12.6035 Seconds (without alignments) 1847.299 Million cell updates/sec
    196
1943
1043
1794
1795
2275
2275
980
980
980
2250
2350
2350
2350
2350
  B
CS021_HUMAN
CS021_PONPY
CS021_MOUSE
CS0117_EMENI
QSTM7_EMENI
QSTM7_EMENI
QSTM3_STRCL
Q9ACQ1_STRCO
MPIP1_HUMAN
Q4W948_ASPFU
Q9SZM3_ARATFU
Q5SZM3_ENUAS
Q8G186_BRUSU
Q9F16_BRUSU
Q9F16_CION
Q75D25_ASHGO
Q6K9N4 CRYSA
Q6K9N4 CRYSA
CG4A1_DROME
Y1633_ARCFU
Q7NDR8 CHRVO
Q53MB7_ORYSA
CG4A1_DROME
Y1633_ARCFU
Q7NDR8 CHRVO
Q53MB7_ORYSA
Q82QF4_STRAM
Q82QF4_STRAM
Q82QF4_STRAM
Q7RU3_NEUCR
Q7RU3_NEUCR
Q7RU3_NEUCR
Q7RU3_BRUCR
Q7RU3_BRAFIE
Q8G160_9RHIZ
Q7S2D8_NEUCR
Q7S2D8_NEUCR
Q7S2D8_NEUCR
Q7S2D8_NEUCR
Q7S2D8_NEUCR
Q672B4_BRAFIE
Q580VS_9TRYP
Q602R8_RAOPA
G1GC_METCA
  SUMMARIES
   2166443
   Q53mb7
Q82qf4
Q82qf4
Q7ru3
Q7ru3
Q7ru4
Q7s2d8
Q8gj60
Q7s2d8
Q9rnd0
Q9rnd0
Q9rnd0
Q6g2b4
Q580v5
Q6n2r8
  Q98zw3
Q57£t5
Q8g368
   Q8yel6
Q86na6
  QSb1y7
   Description
  Q6k9n4
  Q4w9j8
  0 archaeoglob
8 chromobacte
7 oryza sativ
4 streptomyce
1 neurospora
9 neurospora
6 gibberella
0 bartonella
   6 ciona intes
5 ashbya goss
4 oryza sativ
0 drosophila
  4 homo sapien
8 aspergillus
3 arabidopsis
5 brucella ab
8 brucella su
6 brucella me
   5 trypanosoma
8 rhodopseudo
5 methylococc
                                     neurospora
perca fluvi
bartonella
bartonella
  homo sapien
pongo pygma
mus musculu
  streptomyce
streptomyce
   aspergillus
```

Query Match

DB 1;

Length 679;

```
RESULT 3
CG021 MOU
ID CG022
AC Q9D2
AC Q9D2
DT 13-7
DT 13-7
DT 13-7
DT 13-7
DT 13-7
DT MAR
OC MAR
OC MAR
OC MAR
OC MAR
OC MAR
OC MAR
AN ME
RA NI
RA NI
RA NI
RA B
RA B
RA B
RA G
RA C
   SOLUTION OF SOLUTI
  밁
   á
  밁
  Ş
   Query Match
Best Local S
Matches 32
   Best Loc
Matches
  CS021 PONPY
Q5RBH3;
NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].

MEDLINE=2235463; PubMed=1246685; DOI=10.1038/nature01266;

Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo S.,

Nikaido I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa H.

Yagi K., Tomaru Y., Hasegawa Y., Nogami A., Schombach C., Gojobori

Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J.,

Schriml L.M., Kanapin A., Matsuda H., Batalov S., Beisel K.W.,

Schriml L.M., Kanapin A., Matsuda H., Batalov S., Corbani L.E., Cousins

Blake J.A., Bradt D., Brusic V., Chothia C., Corbani L.E., Cousins

Dalla E., Dragani T.A., Fletcher C.F., Forrest A., Frazer K.S.,

Gaasterland T., Gariboldi M., Gissi C., Godzik A., Gough J.,

Grimmond S., Gustincich S., Hirokawa N., Jackson I.J., Jarvis E.D.,
   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi; Muroidea; Muridae; Murinae; Mus.
   Mus musculus (Mouse).
   Protein Cl9orf21 homolog.
  13-SEP-2005 (Rel. 48, Created)
13-SEP-2005 (Rel. 48, Last sequence update)
13-SEP-2005 (Rel. 48, Last annotation update)
  SEQUENCE
   Coiled coil.
  EMBL; CR858675; CAH90887.1;
   This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not
   The German cDNA consortium;
Submitted (NOV-2004) to the EMBL/GenBank/DDBJ databases.
   Pongo pygmaeus (Orangutan).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
  13-SEP-2005 (Rel. 48, Created)
13-SEP-2005 (Rel. 48, Last seq
13-SEP-2005 (Rel. 48, Last ann
Protein C19orf21 homolog.
  NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA]
  NCBI_TaxID=10090;
   PONPY
  MOUSE
  Local
  TaxID=9600
   621
   SSOOM
   32,
   ۳
  ب
   Similarity
32; Conserv
   Similarity
   EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE
  EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
  EDPVDSAPPGORKKEOWYAGINPSDGINSEVLE
   EDPVDSAPPGORKKEOWYAGINPSDGINSEVLE 653
  97.2%;
nilarity 97.0%;
Conservative
  685 AA;
   Conservative
  551
  STANDARD;
   STANDARD;
  97.2%;
97.0%;
  75892 MW;
   Last annotation
   Last sequence update)
  -; mRNA.
   0,
   Score 171; DB
Pred. No. 6.4e
0; Mismatches
  Score 171; DB 1; -
Pred. No. 6.4e-15;
   Potential
   PRT;
  A3A99F4343396E81
  648
  update)
   6.4e-15;
  ⋛
   659
  CRC64;
   Length 685;
  Indels
  Indels
   <u>..</u>
  0
   Gaps
  Gaps
  .
  0
  0
```

RESULT 4 Q5B1Y7 EM ID Q5B1 AC Q5B1 DT 10-M

EMENI

Q5B1Y7 EMENI PRELIMINARY; Q5B1Y7; 10-MAY-2005 (TrEMBLrel. 30,

Created)

343

밁 δ

```
RX. SIRALN=FOD, 11500E-COLUM,

RX MEDILINE=2238855; Pubmedei12477932; DOI=10.1073/pnas.242603899;

RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

RA Altechal S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Altechal S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Diatchenko L., Marusina K., Farmer A.A., Romanan R.D., Mullahy S.J.,

RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

RA Pahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

RA Rahting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

RA Rodriguez A.C., Grinwood J., Schmutz J., Myers R.M.,

RA Rodriguez A.C., Grinwood J., Schmutz J., Myers R.M.,

RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;

"Generation and initial analysis of more than 15,000 full-length human

"Generation and initial analysis of more than 15,000 full-length human
  Ranai A., Kawaji H., Kawasawa Y., Kedzierski R.M., King B.L.,

Konagaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A.,

Randoltt D.R., Maltais L., Marchionni L., McKenzie L., Miki H.,

Randoltt D.R., Maltais L., Marchionni L., McKenzie L., Miki H.,

Randoltt D.R., Maltais L., Marchionni L., McKenzie L., Miki H.,

Randoltt D.R., Miki H.,

Randoltt D.R., Miki H.,

Randoltt D.R., Numata K., Okido T., Pavan W.J., Pertea G., Pesole G.,

Red D.J., Reid J., Ring B.Z., Ringwald M.,

Randolin A., Schneider C., Semple C.A., Secou M., Shinada K.,

Sultana R., Takenaka Y., Taylor M.S., Teasdale R.D., Tomita M.,

Verardo R., Wagner L., Wahlestedt C., Wang Y., Watanabe Y., Wells C.,

Walling L.G., Wynshaw-Boris A., Yangaisawa M., Yang I., Yang L.,

Yan Z., Zavolan M., Zhu Y., Zimmer A., Carninci P., Hayatsu N.,

Yan Yan, J., Waki K., Kawai J., Aizawa K., Arakawa T., Fukuda S.,

Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,

Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,

Hara A., Hashizume W., Imoteni K., Ishii Y., Itoh M., Kagawa I.,

Miyazaki A., Sakai K., Sasaki D., Shibata K., Shinagawa A.,

Yasunishi A., Yoshino M., Materston R., Lander E.S., Rogers J.,
  Matches
  Query Match
Best Local
  This Swiss-Prot entry is copyright. It is produced through a collect between the Swiss Institute of Bioinformatics and the EMBL outstathe European Bioinformatics Institute. There are no restrictions of the European Bioinformatics Institute, and this statement
  "Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs."; Nature 420:563-573(2002).
  EMBL; AKO20266; BAB32049 1; -; mRNA.
EMBL; BC013508; AAH13508.1; -; mRNA.
Ensembl; ENSMUSG00000035852; Mus musculus
MGI; MGI:1926156; 9130017N09Rik.
   NUCLEOTIDE SEQUENCE [LARGE STRAIN=FVB/N; TISSUE=Colon;
   Birney E., Hayashizaki Y.;
   SEQUENCE
   and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
   removed.
  CO11.
   u
  Similarity
DSAPPGOKTRKEMWYAGINPSDSVNSEVL
  DSAPPGOR-KKEOWYAGINPSDGINSEVL
   511
648 l
  70.2%;
nilarity 79.3%;
Conservative
   A,
  534 Pc
; 72281 MW;
  SCALE MRNA].
  ω
•
  Score 123.5; DB 1
Pred. No. 2.7e-08;
3; Mismatches 2
   Potential.
1E395B70763B3D1F CRC64;
621
   32
  is produced through a collaboration -
  1;
  2,
  Length
  restrictions on i
  648;
   ng L.,
su N.,
Sato K.,
  1;
  Gaps
   Ģ.,
   human
   <u>ر</u>.
   18
  1;
```

STREET REPORTED BY COLOR 
```
RESULT
Q6TMR3_
   ð
밁
   Arachchi H.M., Barma N., Bastien V., Bloom T., Boguslavkiy L.,

RA Arachchi H.M., Barma N., Bastien V., Bloom T., Boguslavkiy L.,

RA Cheepel Y., Collymore A., Cook A., Cooke P., Corum B., DeArellano K.,

RA Diaz J.S., Dodge S., Dooley K., Dorris L., Elkins T., Engels R.,

RA Diaz J.S., Dodge S., Dooley K., Dorris L., Elkins T., Engels R.,

RA Hagylan D., Faro S., Ferreira P., FitzGerald M., Gage D., Galagan J.,

RA Gardyna S., Gnorre S., Graham L., Grand-Pierre N., Hafez N.,

RA Hagopian D., Hagos B., Hall J., Horton L., Hulme W., Iliev I.,

RA Hagopian D., Johnson R., Jones C., Kamal M., Kamat A., Karatas A.,

RA Hagopian D., Johnson R., Jones C., Kamal M., Kamat A., Karatas A.,

RA Hagopian D., Janders T., Levine R., Lindblad-Toh K., Liu G., Lui A.,

RA Kells C., Landers T., Levine R., Lindblad-Toh K., Liu G., Lui A.,

RA Matthews C., MacLean C., Macdonald P., Major J., Manning J.,

RA Matthews C., Manceli E., McCarthy M., Meldrim J., Meneus L.,

RA Milbora T., Mlenga V., Murphy T., Naylor J., Nguyen C., Nicol R.,

RA Nielsen C., Porton K., Phunkhang P., Pierre N., Purcell S.,

RA Nielsen C., Schupback R., Sewery P., Smirnov S.,

RA Rachupka A., Ramasamy U., Raymond C., Retta R., Rise C., Rogov P.,

RA Roman J., Schauer S., Schupback R., Sewery P., Smirnov S.,

RA Smith C., Spencer B., Stange-Thomann N., Scojanovic N., Stubbs M.,

Vanes J., Viel R., Von A., Wang S., Wilson B.,

Vanes P., Venkataraman V.S., Viel R., Vo A., Wang S., Wilson B.,

Vanes P., Venkataraman V.S., Viel R., Vo A., Wang S., Wilson B.,

Vanes P., Venkataraman V.S., Viel R., Vo A., Wang S., Wilson B.,

RA Wang Limbou S., Viel R., Vo A., Wang S., Wilson B.,

RA Wang Limbou S., Viel R., Vo A., Wang S., Wilson B.,

RA Wang Limbou S., Viel R., Vo A., Wang S., Wilson B.,

RA Wang Limbou S., Viel R., Vo A., Wang S., Wilson B.,

RA Wang Limbou S., Viel R., Vo A., Wang S., Wilson B.,

RA Wang Limbou S., Viel R., Vo A., Wang S., Wilson B.,

RA Wang Limbou S., Viel R., Vo A., Wang S., Wilson B.,

RA Wang Limbou S., Viel R., Vo A., Wang S., Wilson B
  Query Match
Best Local S
Matches 13
   Aspergillus nidulans FGSC A4.
Eukaryota, Fungi; Ascomycota;
Eurotiales; Trichocomaceae; Er
   Hypothetical protein. ORFNames-AN5443.2;
  Birren B., Nusbaum C., At
Arachchi H.M., Barna N.,
   05-JUL-2004 (TrEMBLrel. 27, 05-JUL-2004 (TrEMBLrel. 27, 05-JUL-2004 (TrEMBLrel. 27,
   submitted (JAN-2004) to the EMBL
   STRAIN-FGSC
  NUCLEOTIDE SEQUENCE.
  10-MAY-2005 (TrEMBLrel.
10-MAY-2005 (TrEMBLrel.
  NUCLEOTIDE SEQUENCE.
Wu W., Roy K.L.;
Submitted (SEP-2003) to the
   Q6TMR3_STRCL
Q6TMR3;
   Hypothetical
  Streptomycineae;
NCBI_TaxID=1901;
  Bacteria, Actinobacteria, Actinobacteridae, Actinomycetales, Streptomycineae, Streptomycetaceae, Streptomyces.
  Streptomyces clavuligerus.
   Putative secreted protein.
ORFNames=pSCL2.6.A8.6c;
                                   EMBL; AY392416; AAQ93560.1;
   Plasmid pSCL2
SEQUENCE
                   Plasmid.
  STRCL
   preliminary data.
i, AACD01000094; EAA62603.1; -; Genomic_DNA.
  166
  l Similarity
13; Conserv
   S
   Wyman D.,
  DAAAPROOKKPLW-TGVNPNKSAKSLALE
   DSAPPGORKKEOWYAGINPSDGINSEVLE
  343 AA;
232 AA;
  Conservative
  PRELIMINARY;
   Young G., Zainoun J., Zembek L.,
  37318 MW; 3150AB128DBECAD7
   33.8%;
   Abouelleil A.,
  30,
 ME;
  Last
Last
   a; Pezizomycotina; Eurotiomycetes;
Emericella.
                                 EMBL/GenBank/DDBJ
-; Genomic_DNA.
  Last
Last
  Created)
  Score 59.5; D
Pred. No. 12;
4; Mismatches
  4
  PRT;
 704240B23746D3F7
  sequence update)
annotation updat
  annotation update)
  sequence update)
   Allen
  232
   33
   DB 2;
   z
;
  11;
  databases
  CRC64;
   Length 343;
   Zimmer A.,
  Indels
  which
  ۲,
  Gaps
  ۲,
```

```
RESULT 6
Q9ACQ1 STRCO PRELIMINARY;
AC Q9ACQ1;
DT Q1-UUN-2001 (TrEMBLrel. 17,
DT 01-UUN-2001 (TrEMBLrel. 24,
DT 01-UUN-2003 (TEMBLrel. 24,
DT 01-UN-2003 (TEMBLrel. 24,
DT 01-UN-2003 (TEMBLrel. 24,
DT 01-UN-2003 (TEMBLrel. 24,
DECTION COUNTED SEQUENCE.
REPLOYED SEQUENCE.
REPLOYED SEQUENCE.
REPUBLINE=21996410; PubMed=12
RN NUCLEOTIDE SEQUENCE.
RC STRAIN=A3(2) / M145;
RA HATPOR D., Bateman A., Brow
RA Hatper D., Bateman A., Brow
RA Hatper D., Bateman A., Goble
RA Huang C.-H., Kleser T., Goble
RA Huang C.-H., Kleser T., Goble
RA Hatper D., Saunders D., Sha
RA Warren T., Wietzorrek A., W
RA Hopwood D.A.;
RT "Complete genome sequence of
RT "Complete genome sequence of
RT "Complete proteome.
Complete proteome. 2413 M
Complete proteome.
   밁
   ş
맑
   S
   Best Loc
Matches
   Query Match
Best Local :
  Query Match
   Matches
  STRAIN-A3(2) / M145;

STRAIN-A3(2) / M145;

MEDLINE-21996410; PubMed=12000953; DOI=10.1038/417141a;

Bentley S.D., Chater K.F., Cerdeno-Tarraga A.-M., Challis G.L.,

Bentley S.D., Chater K.F., Cerdeno-Tarraga A.-M., Kleser H.,

Thomson N.R., James K.D., Harris D.E., Quail M.A., Kleser H.,

Harper D., Bateman A., Brown S., Chandra G., Chen C.W., Collins M.,

Cronin A., Fraser A., Goble A., Hidalgo J., Hornsby T., Howarth S.,

Cronin A., Fraser A., Goble A., Hidalgo J., Hornsby T., Howarth S.,

Huang C.-H., Kleser T., Larke L., Murphy L.D., Oliver K., O'Neil S.,

Rabbinowitsch E., Rajandream M.A., Rutherford K.M., Rutter S.,

Seeger K., Saunders D., Sharp S., Squares R., Squares S., Taylor K.,

Seeger N., Wietzorrek A., Woodward J.R., Barrell B.G., Parkhill J.,

Warren T., Wietzorrek A., Woodward J.R., Barrell B.G., Parkhill J.,
  p30304; Q81ZH5; Q96IL3; Q9H2F2; 
01-APR-1993 (Rel. 25, Created) 
25-OCT-2004 (Rel. 45, Last sequence up 
10-MAY-2005 (Rel. 47, Last annotation 
M-phase inducer phosphatase 1 (EC 3.1. 
phosphatase Cdc25A).
   Putative secreted protein. OrderedLocusNames=SCP1.267;
  Homo sapiens (Human
Eukaryota; Metazoa;
Mammalia; Eutheria;
  Streptomycineae; Streptomycetaceae;
NCBI_TaxID=1902;
   SEQUENCE
   Nature 417:141-147(2002).
EMBL; AL590464; CAC36793.1; -;
                    Galaktionov K.I., Beach D.;
"Specific activation of cdc25 tyrosine phosphatases evidence for multiple roles of mitotic cyclins.";
  NCBI_TaxID=9606;
   MPIP1
  NUCLEOTIDE SEQUENCE (ISOFORM 1).
MEDLINE=92103683; PubMed=1836978; DOI=10.1016/0092-8674(91)90294-9;
   HUMAN
  "Complete genome sequence of the model actinomycete Streptomyces
  Local
   17
   71
   HUMAN
   15 EQWYAGINPSDGIN--SEVL
   l Similarity
12; Conser
   12;
   Similarity
   WYAGINPSDGIN--SEVL
   WNAGLNPSDGCNTRNEVL
   219 AA;
   (TrEMBLrel. 17, (TrEMBLrel. 17,
   Conservative
   Conservative
  (Human)
   STANDARD;
   23413 MW;
  33.0%;
  Chordata; Craniata;
Euarchontoglires; Pi
   31.8%;
   24,
  Actinobacteridae; Actinomycetales; ycetaceae; Streptomyces.
   88
   32
   2
  Score 58; DB Pred. No. 12; 2; Mismatches
   2
   Last sequence update)
Last annotation updat
   Created)
   Score 56;
Pred. No.
   75
   32
   Genomic_DNA
   417CB9C6345C9F0F CRC64;
  tion update)
3.1.3.48) (
  update)
   524
  Primates;
  Vertebrata; Euteleostomi;
rimates; Catarrhini; Homin
   DB 2;
   ₽
  'n
  (Dual specificity
  Length 232;
   Length 219;
   Indels
  à
  B-type cyclins:
  2
   2
  Hominidae;
  Gaps
   Gaps
  ۳.
   ۲,
```

```
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Stapleton M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Hichards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Mhiting M., Madan A., Young A.C., Shevchenko Y., Sanchez A.,
RA Hakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT and mouse cDNA sequences.";
  Cell 93:
        the
use
   between
  This
  Fauman E.B., Cogswell J.P., Lov
Montana V.G., Piwnica-Worms H.,
   (6)

X-RAY CRYSTALLOGRAPHY (2.3 ANGSTROMS) OF 336-496.

MEDLINE=98265972; PubMed=9604936; DOI=10.1016/S0092-8674(00)81190-3;

MEDLINE=98265972; PubMed=9604936; DOI=10.1016/S0092-8674(00)81190-3;
   Wegener S., Hampe W., Herrmann D., Schaller H.C.; "Alternative splicing in the regulatory region of the human phosphatases CDC25A and CDC25C.";
  Submitted
   Miyamoto K.E., Nguyen C.P., Nguyen
Schackwitz W.S., Sherwood J.K., Wi
"NIEMS-SNPE, environmental genome
of Genome Sciences, Seattle, WA (U
  NUCLEOTIDE SEQUENCE (ISOFORM 2).
Varmeh-Ziaie S., Manfredi J.J.;
Submitted (JUL-2002) to the EMBL/GenBank/DDBJ databases.
   rauman E.B., Cogswell J.P., Lovejoy B., Rocque W.J., H
Montana V.G., Piwnica-Worms H., Rink M.J., Saper M.A.;
"Crystal structure of the catalytic domain of the huma
   MEDLINE=22388257;
  Rieder M.J
   NUCLEOTIDE SEQUENCE OF 37-234 (ISOFORM 2).
s Swiss-Prot entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation European Bioinformatics Institute. There are no restrictions on it as long as its content is in no way modified and this statement is no
   IsoId=P30304-2; Sequence=VSP_000860; SIMILARITY: Belongs to the MPI phosphatase family. SIMILARITY: Contains 1 rhodanese domain.
   control. It is a tyrosine protein phosphatase required for progression of the cell cycle. It directly dephosphorylates CDC2 and activate its kinase activity. It also dephosphorylates CDK2 complex with cyclin B, in vitro.

CATALYTIC ACTIVITY: Protein tyrosine phosphate + H(2)O = protein
  Event-Alternative splicing; Named iso
Name=1; Synonyms=CDC25A1;
IsoIdaP30304-1; Sequence=Displayed;
Name=2; Synonyms=CDC25A2;
   tyrosine + phosphate.
ENZYME REGULATION: Stimulated
ALTERNATIVE PRODUCTS:
   FUNCTION: Functions as a dosage-dependent inducer in mitotic
  Natl. Acad.
  phosphatase,
:617-625(1998)
  (JUL-2002)
  SEQUENCE [LARGE SCALE MRNA] (ISOFORM 1).
   SEQUENCE [GENOMIC DNA], AND VARIANT PHE-88.
  Biol.
   Livingston
  ingston R.J., Braun A.C., Montoya M.A., Chung
Juyen C.P., Nguyen D.A., Poel C.L., Robertson
Sherwood J.K., Witrak L.A., Nickerson D.A.,
   PubMed=12477932; DOI=10.1073/pnas.242603899;
  Sci. U.S.A.
  79:810-815 (2000)
  werwood J.K., Witrak L.A., Nickerson D.A.;
nmental genome project, NIEHS ES15478, Department
Seattle, WA (URL: http://egp.gs.washington.edu).";
) to the EMBL/GenBank/DDBJ databases.
   Cdc25A.";
  99:16899-16903 (2002)
  δÂ
  cyclins
  isoforms=2;
  w
   human cell cycle
  a collaboration
   M. -W.,
   human
```

```
맑
            8
                           Query Match
Best Local S
Matches 10
   PRINTS; PRUU/11,
SMART; SM00450; RHOD; 1.
SMO0450; RHODANESE 3; 1.
PROSITE; PS50206; RHODANESE 3; 1.
PROSITE; PS50206; RHODANESE 3; 1.
  STRAND
HELIX
TURN
TURN
STRAND
TURN
HELIX
HELIX
HELIX
STRAND
STRAND
   TURN
STRAND
TURN
STRAND
  TURN
STRAND
STRAND
TURN
STRAND
HELIX
TURN
STRAND
HELIX
TURN
STRAND
  CONFLICT
CONFLICT
STRAND
   ACT_SITE
VARSPLIC
   Protein
DOMAIN
ACT_SITE
   TURN
   GO; GO:0008283; P:cell proliferation; T
GO; GO:000079; P:regulation of cyclin
InterPro; IPR000751; MPI phosphatase.
InterPro; IPR001763; Rhodanese-like.
PANTHER; PTHR10828; MPI phosphatase; 1.
Pfam; PF06517; M-inducer phosp; 1.
Pfam, PF00581; Rhodanese; 1.
   MIM;
  PDB; 1C25; X-ray; @=337-496.
Ensembl; ENSG00000164045; Hc
HGNC; HGNC:1725; CDC25A.
  TURN
  VARIANT
   PIR; A41648;
PDB; 1C25; X
  Reactome;
  H-InvDB; HIX0003280; -.
   M81933; AAA58415.1; -;
AY137580; AAN11305.1;
AF527417; AAM77917.1;
277
                           10;
                                  Similarity
   phosphatase.
ERŚQEESPPGSTKRRKSMSGASPKESTNPE
             EDSVDSAPPGQRKKEQWYAGINPSDGINSE
   P30304; -.
   524 AA;
  A41648.
  AAH07401.1;
AAH18642.1;
AAG41884.1;
   482
431
183
   59087 MW;
                                 31.8%;
  -; mRNA
   Homo
  -; mRNA.
-; Genomic_DNA.
                           Score 56; DB
Pred. No. 60;
7; Mismatches
   EPPHR ->
PAR -> QI
  Missing (in isoform 2).
/FTId=VSP_000860.
S -> F (in dbSNP:3731499)
  Rhodanese
   /FTId=VAR
   mRNA.
mRNA.
mRNA.
   sapiens
   B2F6B792D4E6122B CRC64;
   QLG (in Ref. 1).
   Cell cycle; Cell division; 
y; Polymorphism;
   TAS.
   SPAP (in Ref. 1).
  020932
   dependent protein kina. .
              30
 306
                           13;
   Length 524
  2)
                            Indels
                           ..
                            Gaps
   TAS
                           0,
```

```
Q4W9JB_ASPFU PRELIMINARY;
AC Q4W9JB;
DT 13-SEP-2005 (TrEMBLrel. 31,
DE Calcium permease family mem
GN QREPAMESS Fungi; Ascomycot
QC Eurotiales; Trichocomaceae;
QX NCBI_TAXID=330879;
RN QCBI_TAXID=330879;
RN QCBI_TAXID=33087
뭉
  Hass H., Harris D., Horiuchi H., Huang J., Humphrey S., Jimenez J.,

Keller N., Khouri H., Kitamoto K., Kobayashi T., Kulkarni R.,

Kumagai T., Lafton A., Latge J.-P., Li W., Lord A., Lu C.,

Kumagai T., Lafton A., Latge J.-P., Li W., Lord A., Lu C.,

Kumagai T., May G.S., Miller B.L., Mohamoud Y., Molina M., Monod M.,

Majoros W.H., May G.S., Miller B.L., O'Neil S., Paulsen I.,

Penalva M.A., Pertea M., Price C., Pritchard B.L., Quail M.A.,

Renauld H., Robson G.D., Rodriguez de Cordoba S., Rodriguez-Pena J.M.,

Rabbinowitsch B., Rawlins N., Rajandream M.-A., Reichard U.,

Renauld H., Robson G.D., Rodriguez de Cordoba S., Rodriguez-Pena J.M.,

Ranchig C.M., Rutter S., Salzberg S.L., Squares R., Squares S.,

Ranchez-Ferrero J.C., Saunders D., Seeger K., Squares R., Squares S.,

Takeuchi M., Tekaia F., Turner G., Vazquez de Aldana C.R., Weidman J.,

White O., Woodward J., Yu J.-H., Fraser C., Galagan J.E., Asai K.,

"Genomic sequence of the pathogenic and allergenic filamentous fungus

Taspergillus fumigatus.";

Submitted (MAY-2005) to the EMBL/GenBank/DDBJ databases.
  Query Match
Best Local S
Matches 10
   NUCLEOTIDE SEQUENCE.
Bevan M., Murphy G., I
Mayer K.F.X., Lemcke I
Submitted (MAY-1999)
  01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
13-SEP-2005 (TrEMBLrel. 31, Last sequence update)
13-SEP-2005 (TrEMBLrel. 31, Last annotation update)
Hypothetical protein F6G3.130 (Hypothetical protein AT4g30100).
Name=F6G3.130; Synonyms-AT4g30100;
Arabidopsis thaliana (Mouse-ear cress).
Eukaryota; Viridiplantes; Streptophyta; Embryophyta; Tracheophyta;
Eukaryota; Magnollophyta; eudicotyledons; core eudicotyledons;
Spermatophyta; Magnollophyta; eudicotyledons; core eudicotyledons;
   Nierman W., Pain A., Anderson M.J., Wortman J., Kim H.Stanley., Arroya J., Berrinan M., Abe K., Archer D.B., Berméjo C., Bennet Bowyer P., Chen D., Colliss M., Coulsen R., Davies R., Dyer P.S. Farman M., Fedorova N., Fosker N., Fraser A., Garcia J.L., Garcia M.J., Goble A., Fosker N., Fraser A., Griffith-Jones S., Gwilliam R., Haas B., University N., Griffith-Jones S., Gwilliam R., Haas B.,  Aspergillus fumigatus Af293.
Eukaryota; Fungi; Ascomycota;
   13-SEP-2005 (TrEMBLrel. 31, Created)
13-SEP-2005 (TrEMBLrel. 31, Last sequence upon 13-SEP-2005 (TrEMBLrel. 31, Last annotation upon 13-SEP-2005)
   Q9SZW3 ARATH PRELIMINARY;
Q9SZW3;
   NCBI_TaxID=3702;
  rosids;
        NUCLEOTIDE
   CAUTION: The sequence shown here is derived in EMBL/GenBank/DDBJ whole genome shotgun (WGS)
   183
  2 DSVDSAPPGORKKEOWYAGINPSDGINSE 30
  Similarity
  eurosids
   EAIGTRPPSQQSEASSHHGINHGDGDNDE
  II,
  ; EAL84615.1;
: 123585 MW;
  31.8%;
   Ridley P., Hudson K., Schueller C.; to the EMBL/GenBa
  Brassicales;

    Created)
    Last sequence update)
    Last annotation update)

   a; Pezizomycotina; Eurotiomycetes;
mitosporic Trichocomaceae; Asperg
   7;
   EMBL/GenBank/DDBJ databases
  Pred.
   Score 56; DB 2;
Pred. No. 1.4e+02
   Hudson S.,
   Mismatches
   -; Genomic DNA.
8A1C813C4CA1FEB5
  Brassicaceae;
  1117
   1311 AA
   211
  .4e+02;
  ያ
  Bancroft I.,
  Length 1117;
  ore eudicotyledons;
Arabidopsis.
  entry which
   CRC64;
   Indels
   Dyer P.S.,
   Aspergillus
   Mewes
   0
   H.W.
   0
```

```
OS B B B RESULT 10 7275 10 727
  á
  밁
   RESULT
Q8G368
   SSSERRERE
   S
   밁
   Query Match
Best Local S
Matches 9
   Query Match
Best Local Similarity
Matches 12; Conser
  LT 10
T5 BRUAB I
Q57FT5 BRUAB I
Q57FT5;
10-MAY-2005 (1)
10-MAY-2005 (1)
10-MAY-2005 (1)
   Q8G368 BRUSU
Q8G368;
01-MAR-2003
  BU Arabidopsis sequencing pu
Submitted (MAR-2000) to the
  NUCLEOTIDE SEQUENCE.
Murphy G., Ridley P., Hi
Submitted (MAR-2000) to
   EMBL; AL078464; CAB43845.1;
EMBL; AL161576; CAB81003.1;
PIR; T08986; T08986.
   EU Arabidopsis sequencing posubmitted (MAY-1999) to the
  J. Bacteriol. 187:2715-2726(2005).
EMBL; AB017223; AAX73499.1; -; Genomic_I
Complete proteome; Hypothetical protein.
SEQUENCE 196 AA; 21701 MW; BAA4DFAH
  SEQUENCE
   NUCLEOTIDE SEQUENCE
   01-MAR-2003
01-MAR-2003
   Halling S.M., Peterson-Burch B.D., Bricker B.J., Zuerner R.L., Qing Z., Li L.-L., Kapur V., Alt D.P., Olsen S.C.; "Completion of the genome sequence of Brucella abortus and comparison to the highly similar genomes of Brucella melitensis and Brucella
  STRAIN-9-941 / Biovar 1;
PubMed=15805518; DOI=10.1128/JB.187.8.2715-2726.2005;
   Brucella abortus
   OrderedLocusNames=BruAb1_0082;
  Hypothetical protein.
  Hypothetical protein. SEQUENCE 1311 AA;
   Brucella suis.
   OrderedLocusNames=BR0084;
  NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA]
  Brucellaceae; Brucella.
   Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales;
Brucellaceae; Brucella.
                                 Bacteria; Proteobacteria;
  Hypothetical
  guis.
  11
BRUSU
   1276
   77
  10
   <u>,</u>
  BRUSU
   Similarity 9; Conserv
   ENSVDDSDPPGDRYRDAWQHGI 1297
   EDSV-DSAPPGORKKEOWYAGI 21
   GSKKPHSIYAGVSPSPGLNA
  GORKKEOWYAGINPSDGINS
  5 (TrEMBLrel. 30,
5 (TrEMBLrel. 30,
5 (TrEMBLrel. 30,
  Conservative
   Conservative
   (TrEMBLrel.
  (TrEMBLrel.
   PRELIMINARY;
   PRELIMINARY;
  31.2%;
   31.5%;
   145625
  Hudson S., Mewes H.W., L
co the EMBL/GenBank/DDBJ
  project;
ne EMBL/GenBank/DDBJ databases
   project;
                                    Alphaproteobacteria; Rhizobiales,
   ¥
  Created)
Last seq
  -; Genomic_DNA
-; Genomic_DNA.
   EMBL/GenBank/DDBJ
  Created)
Last sequence that the control of the cont
   u
••
  Last annotation update)
   Score 55;
  Score 55.5;
Pred. No. 26
  Pred.
   96
  29
   BAA4DFA1FD4010FA CRC64;
   Genomic_DNA.
   Mismatches
  Mismatches
  0F430B9EB3A02AA4 CRC64
  sequence update)
  sequence up
annotation
   No. 27;
   196
   196
  5; DB
2e+02;
  DB 2;
   ₿
  2
  Lemcke K., Mayer K.F.X.;
  databases
   databases
  6;
  Length 196;
  Length 1311;
   ۲.
   0
   Gaps
   ۲
   0
```

```
Q8YELG BRU
Q8YELG BRU
Q8YELG
D7 01-MB
D8 BRUCCE
RA DELVE
RA ITANO
RA SELEC
RA SELEC
RA MASE
RA ITANO
RA SELEC
RA ITANO
RA SELEC
RA ITANO
RA SELEC
RA SELEC
RA ITANO
RA ITANO
RA ITANO
RA ITANO
RA COMPOLI
SO SEQUE
RA SEQUE
RA COMPOLI
RA COMPOL
   밁
   δ
  NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].

C STRAIN=16M / ATCC 23456 / Biotype 1;

C STRAIN=16M / ATCC 23456 / Biotype 1;

X PubMed=11756688; DOI=10.1073/pnas.221575398;

X DelVecchio V.G., Kapatral V., Redkar R.J., Patra G., Mujer C., Los DelVecchio V.G., Kapatral V., Redkar R.J., Patra G., Mujer C., Los DelVecchio V.G., Kapatral V., Redkar R.J., Datra G., Mujer C., Los Jablonski L., Larsen N., Souza M., Bernal A., Mazur M., Goltsman A. Jablonski L., Larsen N., Hagius S., O'Callaghan D., Letesson J.-J., Tablonski L., Larsen N. Goltsman A. Selkov E., Elzer P.H., Hagius S., O'Callaghan D., Letesson J.-J., "The genome sequence of the facultative intracellular pathogen Brucella melittensis.";

The genome sequence of the facultative intracellular pathogen Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.";

Brucella melittensis.

Brucella meli
Best Local
Matches
   Matches
   Query Match
Best Local
  Query Match
   TIGR; BR0084; -.

GO; GO:0008664; F:2'-5'-RNA ligase activity; IEA.

GO; GO:0016070; P:RNA metabolism; IEA.

GO; GO:0016070; P:RNA metabolism; IEA.

InterPro; IPR004175; 2 5 ligase;

Piam; PF02834; 2 5 RNA 1Igase; 2.

TIGRFAMS; TIGR02258; 2 5 ligase; 1.

Complete proteome; Hypothetical protein.

Complete proteome; Hypothetical protein.

SEQUENCE 196 AA; 21701 MM; BAA4DFA1FD4010FA CRC64;
  Salzberg
Fraser C.
   Complete
SEQUENCE
   OBYEL6-
   NCBI_TaxID=29459;
   Brucellaceae;
   Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales;
   Brucella melitensis.
  OrderedLocusNames=BMEI1862;
  01.MAR-2002 (TYEMBLrel. 20, Created)
01.MAR-2002 (TYEMBLrel. 20, Last sequence update)
01.JUN-2003 (TYEMBLrel. 24, Last annotation update)
2'.5' RNA LIGASE (EC 6.5.1.-)
  "The Brucella suis genome reveals fundamental similarities between animal and plant pathogens and symbionts.";
Proc. Natl. Acad. Sci. U.S.A. 99:13148-13153(2002).
EMBL; AB014291; AAN29040.1; -; Genomic_DNA.
   MEDLINE=22247741; PubMed=12271122; DOI=10.1073/pnas.192319099; Paulsen I.T., Seshadri R., Nelson K.E., Eisen J.A., Heidelberg Read T.D., Dodson R.J., Umayam L.A., Brinkac L.M., Beanan M.J., Bead T.D., Dodson R.J., Umayam L.A., Brinkac L.M., Beanan M.J., Daugherty S.C., DeBoy R.T., Durkin A.S., Kolonay J.F., Madupu R Daugherty S.C., Ayodeji B., Kraul M., Shetty J., Malek J.A., Nelson W.C., Ayodeji B., Kraul M., Shetty J., Malek J.A., Van Aken S.E., Riedmuller S., Tettelin H., Gill S.R., White O., Callaborg S.E., Riedmuller S., Tettelin H., Gill S.R., White O., Callaborg S.E., Riedmuller S., Tettelin H., Gill S.R., White O., Callaborg S.E., Riedmuller S., Tettelin H., Gill S.R., White O., Callaborg S.E., Riedmuller S., Tettelin H., Gill S.R., White O., Callaborg S.E., Riedmuller S., Tettelin H., Gill S.R., White O., Callaborg S.E., Riedmuller S., Tettelin H., Gill S.R., White O., Callaborg S.E., Riedmuller S., Tettelin H., Gill S.R., White O., Callaborg S.E., Riedmuller S., Tettelin H., Gill S.R., White O., Callaborg S.E., Riedmuller S., Tettelin H., Gill S.R., White O., Callaborg S.E., Riedmuller S., Tettelin H., Gill S.R., White O., Callaborg S.E., Riedmuller S., Tettelin H., Gill S.R., White O., Callaborg S.E., Riedmuller S., Tettelin H., Gill S.R., White O., Callaborg S.E., Riedmuller S., Tettelin H., Gill S.R., White O., Callaborg S.E., Riedmuller S., Tettelin H., Gill S.R., White O., Callaborg S.E., Riedmuller S., Callaborg S.E., Riedmuller S., Tettelin H., Gill S.R., White O., Callaborg S.E., Riedmuller S., Tettelin H., Gill S.R., White O., Callaborg S.E., Riedmuller S., Tettelin H., Gill S.R., White O., Callaborg S.E., Riedmuller S., Callab
   NCBI_TaxID=29461;
  BRUME
  10
  77
  BRUME
Similarity 9; Conserv
   Similarity 9; Conserv
  S.L., Hoover D.L., Lindler L.E., Halling S.M., Boyle S.M., .M.;
   proteome.
   GSKKPHSIYAGVSPSPGLNA 96
  GORKKEOWYAGINPSDGINS
  SEQUENCE.
    Conservative
   Conservative
  PRELIMINARY;
  Biovar 1;
   Brucella.
   A
   21731 MW;
  31.2%;
45.0%;
  45.0%;
  31.2%;
    ъ
••
   υ
••
  Score 55;
Pred. No.
                                   Score 55;
Pred. No.
  29
   1AA4CEB0E0EB7D4C
   Mismatches
    Mismatches
  196 AA
  DB
  DB 2;
   2
    9
   6; Indels
  Length 196;
   Length 196;
   CRC64;
    Indels
   Letesson J.-J.,
  Heidelberg J.F.,
   Madupu R.,
  Goltsman
    0,
   0
  9
  807
   Gaps
    Gaps
  ;
   0
    0
```

```
RESULT 13
Q86NA6_CIOIN
   밁
   S
  SOR BERREAR SOR BERRARES OF SO
   닭
   S
  Query Match
Best Local S
Matches
  05-JUL-2004
05-JUL-2004
05-JUL-2004
   Q75DZ5_ASHGO
Q75DZ5;
   Pfam; PF03723; Hemocyanin C; 1.
Pfam; PF00372; Hemocyanin M; 1.
PRINTS; PR00187; HAEMOCYANIN.
PROSITE; PS00498; TYROSINASE 2;
SEQUENCE 794 AA; 92042 MW; 8
  EMBL;
  Ashbya gossypii (Yeast) (Eremothecium gossypii).
Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
Saccharomycetales; Saccharomycetaceae; Eremothecium.
   Ciona intestinalis.
Bukaryota; Metazoa; Chordata; Urochordata; Ascidiacea; Enterogona;
Phlebobranchia; Cionidae; Ciona.
  Q86NA6_CIOIN
Q86NA6;
                    AGD; ABL122C; -.
GO; GO:0003676; F:nucleic acid
  "The Ashbya gossypii genome as a Saccharomyces cerevisiae genome." Science 304:304-307(2004).
   Dietrich F.S., Voegeli S., Brach
Mohr C., Poehlmann R., Luedi P.,
Gaffney T.D., Philippsen P.;
  STRAIN=ATCC 10895;
PubMed=15001715; D
  GO; GO:0016491; F:oxidoreductase activity; IEA.
GO; GO:0005344; F:oxygen transporter activity;
GO; GO:0008152; P:metabolism; IEA.
GO; GO:0006810; P:transport; IEA.
  NUCLEOTIDE SEQUENCE.
Immesberger A., Burmester T.,
   01-JUN-2003
01-MAR-2004
  EMBL; AE016815; AAS50649.1; -;
   NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA]
  Name=ABL122C;
   InterPro; IPR000896;
InterPro; IPR005203;
InterPro; IPR002227;
  HSSP; P04253; 10XY.
  Submitted
   NCBI_TaxID=7719;
   Name=hc-J
   Hemocyanin-like
  01-JUN-2003
  NCBI_TaxID=33169;
  ASHGO
   520
   berger A., Burmester T.;
tted (FEB-2003) to the EMI
AJ547813; CAD68058.1; -;
   10
   77
  œ
  Similarity 9; Conserv
   PRGNKNGEKWLLGVYVSDGKNDQI 543
  PPGQRKKEQWYAGINPSDGINSEV
   GORKKEOWYAGINPSDGINS
   GSKKPHSI YAGVSPSPGLNT
  IPR000504;
  31.2%;
ilarity 37.5%;
Conservative
   (TrEMBLrel. (TrEMBLrel.
  (TrEMBLrel. (TrEMBLrel.
   (TrEMBLrel.
  (TrEMBLrel.
   PRELIMINARY;
  PRELIMINARY;
   protein
  DOI=10.1126/science.1095781;
oegeli S., Brachat S., Lerch A.,
nn R., Luedi P., Choi S., Wing R
   Tyrosinase.
    RNP1
   Hemocyanin.
hemocyanin_C.
   24,
  27, Created)27, Last sequence update)27, Last annotation update)
   Last
Last
   Score 55;
Pred. No. 1
  Created)
   5
  EMBL/GenBank/DDBJ
   29
   96
  ; 1.
81683D936FC3BE6C CRC64;
                      binding; IEA
  Genomic_DNA.
  mRNA.
  Mismatches
   sequence update)
annotation update)
  t001
  31
  1043
   for mapping
   794
   1.3e+02;
ches 10;
   멂
  ξ
   2
  databases.
  R.A.,
   Length 794;
   IEA.
  Gates K., St
.A., Flavier
   Indels
   Steiner
   ٥,
   Gaps
   S
```

0

```
Page 7
```

```
RESULT 15
Q6KSN4_ORYSA PRELIMINARY; PRT; 115 AA.
ID Q6KSN4;
AC Q6KSN4;
DT 05-JUL-2004 (TrEMBLrel. 27, Created)
DT 05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT 05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DT 105-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DT 05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DT 05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DR Hypothetical protein 0J1234_B11.21.
GN Name=0J1234_B11.21.
  Ś
   밁
   밁
  S
   Search completed: March Job time : 15.6035 secs
  Query Match 31.0%; Score 54.5; I Best Local Similarity 41.4%; Pred. No. 17; Matches 12; Conservative 6; Mismatches
  Query Match 31.2%; Score 55; DB 2; Length 1043; Best Local Similarity 35.5%; Pred. No. 1.8e+02; Matches 11; Conservative 8; Mismatches 12; Indels
   SMART; SM00360; RRM; 1.
PROSITE; PS50102; RRM; 1.
Complete proteome;
SEQUENCE 1043 AA; 114750 MW; 9057046CF6897B49 CRC64;
   NUCLEOTIDE SEQUENCE.

NUCLEOTIDE SEQUENCE.

Saeaki T., Matsumoto T., Yamamoto K.;

Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.

EMBL; AP004053; BAD21548.1; -; Genomic_DNA.

Gramene; QGKSN4; -.

Hypothetical protein.

SEQUENCE 115 AA; 12431 MW; ED9EF9A7B1B19A74 CRC64;
  Oryza sativa (japonica cultivar-group).
Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae,
Ehrhartoideae, Oryzeae, Oryza.
  CBI_TaxID=39947;
   2 DSVDSAPPGQRKKEQWYAGINPSDGINSEVL 32
| : || || : |: || : ::|||: :
528 DPMVGAPIGQTLQRQYLAGASQANGINNRTV 558
   79
   3, 2006, 13:26:15
  DB 2; Length 115;
  10;
  Indels
  0
  1; Gaps
  Gaps
  <u>.</u>
  ۲,
```

Coloral strong and state

```
Regult
No.
   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 s
  Minimum DB
Maximum DB
  Scoring table:
  Sequence:
  Title:
Perfect score:
   OM protein -
  Database
   Total number of hits satisfying chosen parameters:
   95
   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed; and is derived by analysis of the total score distribution.
   Score
  seq length: 0 seq length: 2000000000
  protein search, using sw model
  Match Length DB
   BLOSUM62
Gapop 10.0 , Gapext 0.5
   March
  US-10-646-873-46
176
   572060 seqs, 82675679 residues
  Issued_Patents_AA:*
   97
   97
97
   EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
   GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd
  /cgn2_6/ptodata/1/laa/5_COMB.pep:*
/cgn2_6/ptodata/1/laa/6_COMB.pep:*
/cgn2_6/ptodata/1/laa/H_COMB.pep:*
/cgn2_6/ptodata/1/laa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/1/laa/RE_COMB.pep:*
/cgn2_6/ptodata/1/laa/RE_COMB.pep:*
   3, 2006, 13:35:46 ; Search time 4.42566 Seconds (without alignments) 616.473 Million cell updates/sec
                       9555555554111
            US-09-949-016-11684
US-09-270-767-33497
US-09-270-767-48714
   US-09-
US-09-
US-09-
US-09-
US-09-
US-09-
US-09-
  US-09-301-593-43
US-08-073-383-2
  'n.
   summaries
   SUMMARIES
   Sequence
Sequence
  Description
  Sequence
Sequence
  Sequence
Sequence
  Sequence
   Sequence
   Sequence
  Sequence
  Sequence
  Sequence
  Sequence
  Sequence
  Sequence
   Sequence
  Sequence
  2, Appli
2, Appli
2, Appli
2, Appli
2, Appli
  2, Appli
   2, Appl
, Appli
0, Appl
0, Appl
2, Appl
1, Appl
1, Appl
1, Appl
   App1
   RESULT 1
   Sequence 4
                     FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION UNMBER: 08/828,85
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REGISTRATION NUMBER: 6055
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEPAX: 847/938-2623
INFORMATION FOR SEQ ID NO:
  COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: Fast-SEQ for Windows Version
CURRENT APPLICATION DATA:
  APPLICATION NUMBER:
```

|            | 45                | 44                | 43                | 42                | 41                | 40                | 39                | 38                | 37                | 36                | 35            | 34               | 33                | 32              | <u>1</u>          | 30               | 29                | 28                  |
|------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------|------------------|-------------------|-----------------|-------------------|------------------|-------------------|---------------------|
| ALIGNMENTS | 49                | 49                | 49                | 49                | 49                | 49                | 49                | 49                | 49                | 49                | 49            | . 49             | 49                | 49              | 49                | 50               | 50                | 50                  |
|            | 27.8              | 27.8              | 27.8              | -                 | 27.8              | 27.8              | _                 | 27.8              | 27.8              | 27.8              | •             | 27.8             | ٠                 | 27.8            | •                 | 28.4             | 28.4              | 28.4                |
|            | 492               | 492               | 492               | 487               | 487               | 487               | 487               | 472               | 453               | 381               | 381           | 381              | 307               | 284             | 143               | 695              | 695               | 106                 |
|            | Ч                 | ب                 | μ                 | ۳                 | <u>,,</u>         | ۲                 | ۲                 | N                 | N                 | N                 | N             | ນ                | ۲                 | N               | N                 | N                | N                 | N                   |
|            | US-08-464-247A-7  | US-08-123-659A-7  | US-08-462-859A-7  | US-08-464-248A-9  | US-08-464-247A-9  | US-08-123-659A-9  | US-08-462-859A-9  | US-09-301-593-30  | US-09-301-593-18  | US-09-632-575-52  | -09-632-570-2 | US-09-216-295-22 | US-08-442-063A-48 | US-09-141-951-1 | US-09-301-593-26  | US-09-458-481B-5 | US-09-458-481B-4  | US-09-902-540-10501 |
|            | Sequence 7, Appli | Sequence 7, Appli | Sequence 7, Appli | Sequence 9, Appli | Sequence 9, Appli | Sequence 9, Appli | Sequence 9, Appli | Sequence 30, Appl | Sequence 18, Appl | Sequence 52, Appl | •             | •                | Sequence 48, Appl | ₽               | Sequence 26, Appl | ~                | Sequence 4, Appli | Sequence 10501, A   |

US-09-050-516-46 APPLICANT: KRATOCHYI
APPLICANT: ROBERTS-R
APPLICANT: RUSSELL,
APPLICANT: STROUPE,
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION: APPLICANT: APPLICANT: COUNTRY: USA
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette NUMBER OF SEQUENCES: 4 APPLICANT: APPLICANT: APPLICANT: APPLICANT: ADDRESSEE: Abbott Laboratories STREET: 100 Abbott Park Road CITY: Abbott Park INFORMATION: Application US/09050516 HAYDEN, MARK
HODES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
NURNTION: REAGENTS AV GRANADOS, GORDON, FRIEDMAN, PAULA N. COLPITTS, TRAC BILLING-MEDEL, PATRICIA JULIAN TRACT FOR DETECTING DISEASES OF THE GASTROINTESTINAL EDWARD N TRACEY L. AND METHODS USEFUL

08/828,855

6065.US.P1

US/09/050,516

2.0

SEQUENCE CHARACTERISTICS:

LENGTH:

33 amino acide

```
밁
   á
  US-10-278-547-46
   US-09-050-516-46
   Sequence 46, Application Patent No. 6660834
GENERAL INFORMATION:
  Matches
  Query Match
Best Local Similarity
  TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 46:
SEQUENCE CHARACTERISTICS:
   MOLECULE TYPE:
  APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: «Unknown»
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: «Unknown»
APPLICATION NUMBER: 08/828,855
EILING DATE: 31-MAR-1997
  TYPE: amino acid
STRANDEDNESS: sir
   ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IEM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
   APPLICANT: BILLING-MEDEL, PATRICIA
COHEM, MAURICE
COLDITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
GRANADOS, EDWARD N.
TOPOLOGY: linear MOLECULE TYPE: No. 6660834e SEQUENCE DESCRIPTION: SEQ ID NO: 46:
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
  NUMBER OF SEQUENCES: 49
   TITLE OF
   33; Conservative
   1 EDSVDSAPPGORKKEOWYAGINPSDGINSEVLE 33
   LENGTH: 33 amino acids
TYPE: amino acid.
STRANDEDNESS: single
  EDSVDSAPPGORKKEOWYAGINPSDGINSEVLE 33
   ZIP: 60064-3500
  CITY: Abbott Park
   TELEFAX: 847/938-2623
  COUNTRY: USA
  Application US/10278547
  HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   No. 6627414e
  single
  100.0%;
  0; Mismatches
  Score 176; DB 2;
Pred. No. 3.5e-18;
  ٥,
  Length 33
  Indels
  0,
  Gaps
  0;
```

```
밁
  ş
   US-10-278-547-46
   US-09-050-516-47
   RESULT 3
  APPLICANT: SINCE...

TITLE OF INVENTION: REAGENIE...

TITLE OF INVENTION: FOR DETECTING DITITLE OF INVENTION: TRACT

TITLE OF SEQUENCES: 49

CORRESPONDENCE ADDRESS:

"NUMBER OF SEQUENCES ADDRESS ADDRES
   Patent No. 6627414
GENERAL INFORMATION:
  Query Match
Best Local (
  Matches
  Query Match
   INFORMATION FOR SEQ ID NO:
   CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/828
APPLICATION NUMBER: 31-MAR-1997
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
  COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516 .
FILING DATE:
FILING DATE:
   ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   APPLICANT
APPLICANT
   APPLICANT:
  SEQUENCE CHARACTERISTICS
   MOLECULE TYPE: No. 6627414e
  APPLICANT:
   APPLICANT:
   APPLICANT:
  APPLICANT:
   APPLICANT:
  APPLICANT:
  APPLICANT
97.2%;
Local Similarity 97.0%;
hes 32; Conservative
  TOPOLOGY: 11
  TYPE: amino acid
   STREET: 100 Abbott Park Road CITY: Abbott Park
  COUNTRY:
   ENGTH:
   1 EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
   Similarity
   EDSVDSAPPGORKKEOWYAGINPSDGINSEVLE 33
  H
   Application US/09050516
   RUSSELL, JOHN C.
STROUPE, STEPHEN D.
VVENTION.
  HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
   215 amino acids
  USA
  HAYDEN,
HODGES,
   COHEN, MAURICE
  Conservative
  COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
  BILLING-MEDEL, PATRICIA
   GRANADOS,
   linear
   single
   MARK
  JULIAN
   100.0%; Score 176; DB 2;
100.0%; Pred. No. 3.5e-18;
tive 0; Mismatches 0;
  STEPHEN D.
REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   EDWARD N
   08/828,855
  47:
                  <u>,</u>
   6065.US.P1
   Score 171; DB 2;
Pred. No. 1.6e-16;
  Length 215;
   Length 33;
                      Indels
   Indels
  0
                      ٥,
  Gaps
                  0
   0
```

ঠ 밁

157

EDPVDSAPPGORKKEOWYAGINPSDGINSEVLE 189 EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE

ω ω

```
RESULT 4
US-10-278-547-47
밁
                               Ś
  Query Match
Best Local Similarity
Matches 32; Conserv
  guence 47, Application No. 6660834
GENERAL INFORMATION:
  TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
   COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOPTMARE: PASTEM: FOR Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
   HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   APPLICANT: BILLING-MEDEL,
   TOPOLOGY: linear MOLECULE TYPE: No. 6660834e
   REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHNE: 847/935-1729
   ATTORNEY/AGENT INFORMATION:
   PRIOR APPLICATION DATA:
   NUMBER OF SEQUENCES: 49
  SEQUENCE DESCRIPTION: SEQ ID NO:
  APPLICATION NUMBER: US/09/050,516
FILING DATE: <Unknown>
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
  EDPVDSAPPGORKKEOWYAGINPSDGINSEVLE 189
                           BDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
   NAME: Becker, Cheryl L. REGISTRATION NUMBER: 35,441
  CITY: Abbott Park
  STRANDEDNESS: single
   TYPE: amino acid
   TELEFAX: 847/938-2623
   Application US/10278547
  LENGTH: 215 amino acids
  97.2%;
ilarity 97.0%;
Conservative
   COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
GRANNADOS, EDWARD N.
  60064-3500
  HAYDEN, MARK
  TRACT
  0
   Score 171; DB 2;
Pred. No. 1.6e-16;
  Mismatches
  Length 215;
   Indels
  0
  0
```

RESULT 5

US-10-278-547-42

Sequence 42, Applicati Patent No. 6660834 GENERAL INFORMATION:

Application US/10278547

APPLICANT: BIL

BILLING-MEDEL, PATRICIA COHEN, MAURICE

```
US-09-050-516-42
   밁
   S
   ; TOPOLOGY: linear ; MOLECULE TYPE: No. 6627414e US-09-050-516-42
RESULT 6
   Patent.No.
  Query Match
  PILING DATE: 31-MAR-197
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKST NUMBER: 6065
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
   INFORMATION FOR SEQ ID NO:
   APPLICANT:
   OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
   COUNTRY: USA
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   TITLE OF INVENTION:
TITLE OF INVENTION:
  CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
   CORRESPONDENCE ADDRESS:
  NUMBER OF SEQUENCES:
  SEQUENCE CHARACTERISTICS:
   PPLICANT
  PPLICANT
   PPLICANT
  FILING DATE:
   STATE:
   ADDRESSEE: Abbott Laboratories STREET: 100 Abbott Park Road
   Local
   STRANDEDNESS:
   TYPE: amino acid
  LENGTH:
   621 EDPVDSAPPGQRKKEQWYAGINPSDGINSEVLE 653
  1 EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
   2, Application US/09050516 6627414
  h 97.2%;
Similarity 97.0%;
32; Conservative
   Abbott Park
  679 amino acids
  847/938-2623
   ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
VENTION: REAGENTS AND METHODS USEFUL
VENTION: FOR DETECTING DISEASES OF THE GASTROINTESTINAL
VENTION: TRACT
   HAYDEN, MARK
  GRANADOS,
  COHEN, MAURICE COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
  BILLING-MEDEL,
  KRATOCHVIL, JON D.
   IBM Compatible
   single
  S, STEVEN C.
   JULIAN
   49
  EDWARD N.
  08/828,855
  42:
   PATRICIA
  0
   6065.US
   Score 171; DB 2;
Pred. No. 5.8e-16;
   Mismatches
   .
P
   Length 679
   ٥,
   Gaps
   0
```

```
Ś
  SEQUENCE DESCRIPTION: SEQ ID NO: 42: US-10-278-547-42
   US-09-301-593-8
   밁
  GENERAL INFORMATION:
APPLICANT: Park, John E.
APPLICANT: Garin-Chesa, Pi
APPLICANT: Bamberger, Uwe
APPLICANT: Leger, Olivier
   Sequence 8, Application US/09301593A Patent No. 6455677
  Matches
  Best Local Similarity
   Query Match
   APPLICANT:
        FILE REFERENCE:
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 42:
SEQUENCE CHARACTERISTICS:
   PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/09/050,516

PILING DATE: «Unknown»
APPLICATION NUMBER: 08/828,855

PILING DATE: 31-MAR-1997

ATTORNEY/AGENT INFORMATION:

NAME: Becker, Cheryl L.

REGISTRATION NUMBER: 35,441

REFERENCE/DOCKET NUMBER: 6065.US.P1
  OPERATING SYSTEM: DOS
SOPTWARE: PastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
  TELECOMMUNICATION INFORMATION:
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
   TITLE OF
   NUMBER OF SEQUENCES:
   621
T: Saldanha, Jose W.
T: Rettig, Wolfgang J.
INVENTION: FAP-specific Antibody with Improved Producibility
ERENCE: 0652.1890001
  32;
   EDPVDSAPPGORKKEOWYAGINPSDGINSEVLE 653
  EDSVDSAPPGORKKEOWYAGINPSDGINSEVLE 33
   LENGTH: 679 amino acids
TYPE: amino acid
STRANDEDNESS: single
   APPLICATION NUMBER: US/10/278,547 FILING DATE: 23-Oct-2002
  COMPUTER: IBM Compatible
  STATE: IL
   COUNTRY: USA
  STREET: 100 Abbott Park Road CITY: Abbott Park
  TOPOLOGY:
  CLASSIFICATION: <Unknown>
   TELEFAX: 847/938-2623
   TELEPHONE: 847/935-1729
  Conservative
  HODGES, STEVEN C.

KLASS, MICHAEL R.

KRATOCHVIL, JON D.

KRATOCHV
  60064-3500
  GRANADOS,
  GORDON, JULIAN
   COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
   HAYDEN, MARK
  linear
  97.2%;
   Pilar
  EDWARD N.
  Score 171; DB 2;
Pred. No. 5.8e-16;
  Mismatches
   6065.US.P1
   Length 679;
  0
  Gaps
  0
```

```
Ś
   밁
  S
  ; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-301-593-8
   RESULT 9
US-09-301-593-12
   ; ORGANISM: Homo sapiens US-09-301-593-10
   US-09-301-593-10
              GENERAL INFORMATION:
APPLICANT: Park, John B.
APPLICANT: Garin-Chesa, Pilar
APPLICANT: Gamberger, Uwe
APPLICANT: Leger, Olivier
APPLICANT: Saldanha, Jose W.
APPLICANT: Rettig, Wolfgang J.
APPLICANT: Rettig, Wolfgang J.
TITLE OF INVENTION: FAP-specific Antibody with Improved Producibility
FILE REFERENCE: 0652.1890001
  SOFTWARE: PatentIn
SEQ ID NO 10
LENGTH: 124
  SOFTWARE:
   Sequence 10, App. Patent No. 64556
   Matches
   Sequence 12, Application US/09301593A Patent No. 6455677
   Matches
  Query Match
Best Local (
  Query Match
Best Local Similarity
  APPLICANT: Park, John B.
APPLICANT: Garin-Chesa, Pilar
APPLICANT: Bamberger, Uwe
APPLICANT: Leger, Olivier
APPLICANT: Leger, Olivier
APPLICANT: Saldanha, Jose W.
APPLICANT: Rettig, Wolfgang J.
APPLICANT: Rettig, Wolfgang J.
TITLE OF INVENTION: FAP-specific Antibody with Improved Producibility
FILE REFERENCE: 0652.1890001
FILE REFERENCE: 0652.1890001
CURRENT FAPLICATION NUMBER: US/09/301,593A
CURRENT FAPLICATION NUMBER: EP 98107925.4
EARLIER APPLICATION NUMBER: EP 98107925.4
EARLIER FILING DATE: 1998-04-30
EARLIER FILING DATE: 1998-04-30
EARLIER FILING DATE: 1998-04-30
   Patent No.
  CURRENT APPLICATION NUMBER: US/09/301,593A CURRENT FILING DATE: 1999-04-29 EARLIER APPLICATION NUMBER: EP 98107925.4 EARLIER FILING DATE: 1998-04-30 EARLIER APPLICATION NUMBER: US 60/086,049 EARLIER FILING DATE: 1998-05-18 NUMBER OF SEQ ID NOS: 108
   EARLIER APPLICATION NUMBER: US 60/086,049
EARLIER FILING DATE: 1998-05-18
NUMBER OF SEQ ID NOS: 108
CURRENT APPLICATION NUMBER: US/09/301,593A
   TYPE: PRT
   LENGTH: 124
  Local Similarity
  INFORMATION:
   41
   41 PGORL--EWIGGINPNNGI 57
   11;
   11; Conservative
  9 PGQRKKEQWYAGINPSDGI 27
   9 PGORKKEOWYAGINPSDGI 27
   PatentIn Ver. 2.0
   PGORL--EWIGGINPNNGI 57
  Application US/09301593A
   Conservative
  Ver.
  32.4%;
  32.4%;
57.9%;
  2.0
   ω
--
   3; Mismatches
  Score 57; DB
Pred. No. 1.5;
  Score 57; I
Pred. No. 1
  Pred.
   Mismatches
  DB 2;
1.5;
   2
   ω
--
   Length 124;
   Length 124;
   Indels
   2
   2;
   Gaps
   Gaps
   ۲,
   ۲,
```

```
밁
  ঠ
  US-09-301-593-14
  ; ORGANISM: Homo sapiens
US-09-301-593-12
   US-09-301-593-16
  RESULT 11
   ; ORGANISM: Homo sapiens
US-09-301-593-14
   Query Match
Best Local Similarity
Matches 11; Conserv
  SOFTWARE: P
   Matches
   Query Match
Best Local Similarity
   SEQ ID NO 12
  Sequence 16,
  GENERAL INFORMATION:
  Patent No. on....
  SOFTWARE: PatentIn Ver.
   EARLIER FILING DATE: 1998-05-18
NUMBER OF SEQ ID NOS: 108
  CURRENT FILING DATE: 1999-04-29
EARLIER APPLICATION NUMBER: EP 98107925.4
EARLIER FILING DATE: 1998-04-30
EARLIER APPLICATION NUMBER: US 60/086,049
   APPLICANT: Saldanha, Jose W.
APPLICANT: Rettig, Wolfgang J.
APPLICANT: Rettig, Wolfgang J.
TITLE OF INVENTION: FAP-specific Antibody with Improved Producibility
FILE REFERENCE: 0652.189001
CURRENT APPLICATION NUMBER: US/09/301,593A
CURRENT FILING DATE: 1999-044-29
EARLIER APPLICATION NUMBER: EP 98107925.4
EARLIER FILING DATE: 1998-04-30
EARLIER APPLICATION NUMBER: US 60/086,049
   APPLICANT: Saldanha, Jose W.
APPLICANT: Rettig, Wolfgang J.
TITLE OF INVENTION: FAP-specific Antibody with Improved Producibility
   APPLICANT: Park, John E.
APPLICANT: Garin-Chesa, Pi
APPLICANT: Bamberger, Uwe
APPLICANT: Leger, Olivier
  NUMBER OF SEQ ID NOS: 108
  MARLIER FILING DATE: 1998-05-18
  APPLICANT: Park, John E.
APPLICANT: Garin-Chesa, Pi
APPLICANT: Bamberger, Uwe
APPLICANT: Leger, Olivier
  LENGTH: 124
TYPE: PRT
   LENGTH: 124
   14,
  9 PGQRKKEQWYAGINPSDGI 27
   PatentIn Ver.
   PGQRKKEQWYAGINPSDGI 27
  PGORL--EWIGGINPNNGI 57
  PĠQRL--EWIGGINPNNGI 57
  Application US/09301593A
   Application US/09301593A
   Conservative
   Conservative
0652.1890001
TION NUMBER: US/09/301,593A
DATE: 1999-04-29
   32.4%;
  32.4%;
   Pilar
  Pilar
   ω
--
   3; Mismatches
  Score 57;
Pred. No.
  Score 57;
Pred. No. 1
  Mismatches
  DB 2;
  DB 2;
   3; Indels
  3; Indels
   Length 124;
   2
  <u>ب</u>
```

```
밁
   片
  US-09-301-593-38
  RESULT 12
  US-09-301-593-16
  US-09-301-593-39
  JS-09-301-593-38
   SOFTWARE: PatentIn
SEQ ID NO 16
LENGTH: 124
   Matches
   SEQ ID NO 38
   Query Match
   GENERAL INFORMATION:
   Sequence 39, Appli
Patent No. 6455677
   Matches
  Query Match
   GENERAL INFORMATION:
   APPLICANT: Saldanha, Jose W.
APPLICANT: Rettig, Wolfgang J.
TITLE OF INVENTION: FAP-specific Antibody with Improved Producibility
FILE REFERENCE: 0652.1890001
CURRENT APPLICATION NUMBER: US/09/301,593A
CURRENT APPLICATION NUMBER: EP 98107925.4
EARLIER APPLICATION NUMBER: EP 98107925.4
EARLIER FILING DATE: 1998-04-30
   EARLIER APPLICATION NUMBER: EP 98107925.4
EARLIER FILING DATE: 1998-04-30
  APPLICANT: Park, John E.
APPLICANT: Garin-Chesa, Pilar
APPLICANT: Bamberger, Uwe
APPLICANT: Leger, Olivier
   APPLICANT: Park, John E
APPLICANT: Garin-Chesa,
  EARLIER FILING DATE: 1998-05-18
                             APPLICANT: Leger, Olivier
APPLICANT: Saldanha, Jose W.
APPLICANT: Rettig, Wolfgang J.
TITLE OF INVENTION: FAP-specific Antibody with
FILE REFERENCE: 0652.1890001
   EARLIER FILING DATE: 1998-05-18
  APPLICANT: Bamberger, Uwe
   RARLIER APPLICATION NUMBER: US 60/086,049
  TYPE: PRT
ORGANISM: Homo sapiens
   TYPE: PRT
   tent No. 645567
  ORGANISM: Homo sapiens
   LENGTH: 124
   Local Similarity
   Local
   11;
APPLICATION NUMBER: US/09/301,593A FILING DATE: 1999-04-29
   41
   41 PGORL--EWIGGINPNNGI 57
  9 PGORKKEOWYAGINPSDGI 27
   9 PGQRKKEQWYAGINPSDGI 27
   Similarity
  Application US/09301593A
  Application US/09301593A
  Conservative
   Conservative
   Olivier
   Ver.
  Ver.
   32.4%;
57.9%;
   32.4%;
  Pilar
   ω
--
   ω
--
   Score 57;
Pred. No.
   57
   Score 57;
Pred. No.
   Mismatches
  Mismatches
   DB 2;
   DB 2;
   Improved Producibility
   Length 124;
   Length 124;
  2;
  Gaps
  1;
```

```
APPLICANT: Park, John E.
APPLICANT: Garin-Chesa, Pilar
APPLICANT: Bamberger, Uwe
APPLICANT: Legar, Olivier
APPLICANT: Saldanha, Jose W.
APPLICANT: Saldanha, Jose W.
APPLICANT: Saldanha, Jose W.
APPLICANT: Rettig, Wolfgang J.
TITLE OF INVENTION: FAP-specific Antibody with Improved Producibility
FILE REFERENCE: 0652.1890001
CURRENT APPLICATION NUMBER: US/09/301,593A
CURRENT FILING DATE: 1998-04-39
EARLIER APPLICATION NUMBER: EP 98107925.4
EARLIER APPLICATION NUMBER: EP 98107925.4
EARLIER APPLICATION NUMBER: US 60/086,049
EARLIER APPLICATION DATE: 1998-05-18
NUMBER OF SEQ ID NOS: 108
  RESULT 15
US-09-301-593-41
   밁
  5
   밁
   5
   ; LENGTH: 124
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-301-593-40
  US-09-301-593-40
   ; TYPE: PRT ; ORGANISM: Homo sapiens US-09-301-593-39
GENERAL INFORMATION:
APPLICANT: Park, John E.
APPLICANT: Garin-Chesa, Pilar
APPLICANT: Garin-Chesa, Pilar
APPLICANT: Bamberger, Uwe
APPLICANT: Badberger, Uwe
APPLICANT: Saldanha, Jose W.
APPLICANT: Rettig, Wolfgang J.
APPLICANT: Rettig, Wolfgang J.
TITLE OF INVENTION: FAP-specific Antibody with Improved Producibility
FILE REFERENCE: 0652.1890001
CURRENT FILING DATE: 1999-04-29
EARLIER APPLICATION NUMBER: EP 98107925.4
EARLIER FILING DATE: 1998-04-30
  Sequence 41, Application US/09301593A Patent No. 6455677
  Query Match 32.4%;
Best Local Similarity 57.9%;
  SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 40
   Matches
  SEQ ID NO 39
  Matches
   GENERAL INFORMATION:
   Query Match
   Patent No.
  EARLIER FILING DATE: 1998-04-30
EARLIER PELICATION NUMBER: US 60/086,049
EARLIER FILING DATE: 1998-05-18
NUMBER OF SEQ ID NOS: 108
SOFTWARE: Patentin Ver. 2.0
  ENGTH: 124
  / Match 32.4%;
Local Similarity 57.9%;
nes 11; Conservative
   40, Application US/09301593A
o. 6455677
   41
   41
   9 PGQRKKEQWYAGINPSDGI 27
|||| :| |||::||
41 PGQRL--EWIGGINPNNGI 57
   9 PGQRKKEQWYAGINPSDGI 27
  11; Conservative
   PGORL--EWIGGINPNNGI 57
  Score 57; I
Pred. No. 1.

 Mismatches

  Score 57; DB 2;
Pred. No. 1.5;
  Mismatches
  DB 2;
  3; Indels
   Length 124;
  Length 124;
  Indels
  2;
  2
  Gaps
  Gaps
   <u>,</u>
  ۲,
```

```
; LENGTH: 124
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-301-593-41
                                     밁
   ફ
   EARLIER APPLICATION NUMBER: US 60/086,049
EARLIER FILING DATE: 1998-05-18
NUMBER OF SEQ ID NOS: 108
SOFTWARE: PATENTIN Ver. 2.0
SEQ ID NO 41.
  Matches
  Query Match
Best Local Similarity
                                     41 PGORL--EWIGGINPHNGI
   11; Conservative
   9 PGQRKKEQWYAGINPSDGI 27
3, 2006, 13:38:54
  32.4%;
   3; Mismatches
  Score 57;
Pred. No. 1
                                     57
  DB
1.5;
   2
   Length 124;
   Indels
  2
   Gaps
```

ļ

Search completed: March Job time: 5.59232 secs

Sequence Sequence Sequence Sequence

Sequence Sequence

Sequence

Sequence Sequence Sequence

Sequence

41, 108, 10, 43,

Sequence Sequence Sequence Sequence Sequence

Sequence

```
Minimum DB
Maximum DB
   Regult
No.
   š
   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
  Scoring table:
  Run on:
   Database :
   Total number of hits satisfying chosen parameters:
   Perfect score:
   Title:
   protein
      222222211111111
  score greater than or equal to the score and is derived by analysis of the total
  pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed,
   Score
   •
  seq length: 0
seq length: 2000000000
   protein search, using sw model
   US-10-646-873-46
176
  March 3, 2006, 14:09:14; Search time 14.4956 Seconds (without alignments) 951.209 Million cell updates/sec
  BLOSUM62
Gapop 10.0 , Gapext 0.5
   1867569 seqs, 417829326 residues
   1 EDSVDSAPPGORKKEOWYAGINPSDGINSEVLE 33
   Match Length
   Query
  100.0
   Published Applications AA Main:*

1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*

2: /cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*

3: /cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*

3: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*

5: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*

6: /cgn2_6/ptodata/1/pubpaa/US11_PUBCOMB.pep:*
  GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
  172
215
215
679
679
      B
  US-09-301-593-12
US-09-301-593-12
US-09-301-593-16
US-09-301-593-38
US-09-301-593-39
US-09-301-593-39
   占
  US-09-050-516-46
US-10-278-547-46
US-10-646-873-46
   US-09-301-593-8
   US-10-029-386-33676
US-10-425-115-244090
  US-10-646-873-42
US-10-029-386-33
  US-09-050-516-42
US-10-278-547-42
   US-09-050-516-47
   1867569
Sequence 46, Appl
Sequence 47, Appl
Sequence 47, Appl
Sequence 47, Appl
Sequence 47, Appl
Sequence 42, Appl
Sequence 42, Appl
Sequence 42, Appl
Sequence 42, Appl
Sequence 33676, A
Sequence 24099,
Sequence 11, Appl
Sequence 10, Appl
Sequence 11, Appl
Sequence 13, Appl
Sequence 14, Appl
Sequence 16, Appl
Sequence 17, Appl
Sequence 11, Appl
Sequence 110, Appl
Sequence 110, Appl
Sequence 110, Appl
Sequence 110, Appl
Sequence 12, Appl
Sequence 12, Appl
Sequence 13, Appl
Sequence 14, Appl
Sequence 17, Appl
Sequence 18, Appl
Sequence 11, Appl
Sequence 11, Appl
Sequence 12, Appl
Sequence 12, Appl
Sequence 13, Appl
Sequence 14, Appl
Sequence 17, Appl
Sequence 17, Appl
Sequence 18, Appl
Sequence 11, Appl
Sequence 11, Appl
Sequence 11, Appl
   Description
  RESULT 1
US-09-050-516-46
   Sequence 46, Applicat Patent No. US20010010 GENERAL INFORMATION
  APPLICATION NUMBER: US/09/050,516
FILING DATE
CLASSIFICATION:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/828,855
APPLICATION NUMBER: 08/828,855
APPLICATION NUMBER: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REGISTRATION NUMBER: 35,441
REGISTRATION NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEPAX: 847/938-2623
  INFORMATION FOR SEQ ID NO:
   APPLICANT: KRATOCHVI
APPLICANT: ROBERTS-R
APPLICANT: RUSELL,
APPLICANT: STROUPE,
TITLE OF INVENTION:
TITLE OF INVENTION:
   APPLICANT:
  APPLICANT:
   ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: Fast-SEQ for Windows Version
CURRENT APPLICATION DATA:
   STREET: 100 CTY: Abbott Park
STATE: IL
TTCA
  NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
   APPLICANT:
   APPLICANT:
  APPLICANT:
   APPLICANT:
   APPLICANT:
   COUNTRY:
  T: HADDEN, MAKA
TT: HADDES, STEVEN C.

NT: KLASS, MICHAEL R.

NT: KRATOCHVIL, JON D.

ANT: ROBERTS-RAPP, LISA

ANT: ROBERTS-RAPP, LISA

ANT: RUSSELL, JOHN C.

CANT: STROUPE, STEPHEN D.

OF INVENTION: REAGENTS AND METHODS USEFUL

TOURNTION: FOR DETECTING DISEASES OF THE GASTROINTESTINAL

TOURNTION: TOURNTION
  Application US/09050516
  COHEN, MAURICE
COLDITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
GRANADOS, EDWARD N.
  100 Abbott Park Road
  BILLING-MEDEL,
  0010904A1
              46:
  US-10-159-006-8
US-10-159-006-12
US-10-159-006-14
US-10-159-006-14
US-10-159-006-38
US-10-159-006-39
US-10-159-006-40
US-10-159-006-41
US-10-159-006-1108
US-10-159-006-13
US-10-389-223A-10
US-10-389-223A-2
   PATRICIA
   6065.US.P1
   ALIGNMENTS
  2.0
```

SEQUENCE CHARACTERISTICS:

```
RESULT 2
US-10-278-547-46
  밁
   S
  US-09-050-516-46
   Sequence 46, Application No. US2003 GENERAL INFORMATION:
   Matches
   Query Match
Best Local Similarity
  TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 46:
SEQUENCE CHARACTERISTICS:
  TOPOLOGY: 11 MOLECULE TYPE:
   TYPE: amino acid
STRANDEDNESS: sir
   HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.Pl
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
   CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: -Unknown>
PRIOR APPLICATION DATA:
   APPLICANT: BILLING-MEDEL, PATRICIA
COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
TOPOLOGY: linear MOLECULE TYPE: No. US20030082619Ale SEQUENCE DESCRIPTION: SEQ ID NO: 46:
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
   11Ch 100.0%; sal Similarity 100.0%; 33; Conservative 0
   1 EDSVDSAPPGORKKEOWYAGINPSDGINSEVLE 33
  EDSVDSAPPGORKKEOWYAGINPSDGINSEVLE 33
   LENGTH: 33 amino acids
TYPE: amino acid
STRANDEDNESS: single
  APPLICATION NUMBER: US/09/050,516
FILING DATE: <Unknown>
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
  COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
  CITY: Abbott Park
STATE: IL
  ZIP: 60064-3500
  COUNTRY: USA
   TELEFAX: 847/938-2623
   Application US/10278547
   US20030082619A1
   linear
  No. US20010010904A1e
   single
   0; Mismatches
   Score 176; DB 3; Pred. No. 7.6e-16;
   <u>.</u>
  Length 33
   Indels
   0
   Gaps
   0,
```

```
TOPOLOGY: linear;
; MOLECULE TYPE: No. US20040043406Ale
; SEQUENCE DESCRIPTION: SEQ ID NO: 46:
US-10-646-873-46
  밁
  RESULT 3
US-10-646-873-46
  5
  US-10-278-547-46
  Sequence 46, Application US/10646873 Publication No. US20040043406A1 GENERAL INFORMATION:
  Query Match
Best Local S
Query Match 100.0%; Score 176; DB 4; Best Local Similarity 100.0%; Pred. No. 7.6e-16; Matches 3; Conservative 0; Mismatches 0;
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 46:
  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version 2.0
CURRENT APPLICATION NUMBER: US/10/646,873
PILING DATE: 22-Aug-2003
CLASSIFICATION LOMBER: US/09/050,516
PRIOR APPLICATION NUMBER: US/09/050,516
PRIOR APPLICATION NUMBER: US/09/050,516
PILING DATE: 30-MAR-1998
APPLICATION NUMBER: 08/828,855
PILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Hacker Chery1 1.
  Local Similarity
   NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEFAX: 847/938-2623
   HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRAYOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   SEQUENCE CHARACTERISTICS:
LENGTH: 33 amino acids
TYPE: amino acid
  CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
  NUMBER OF SEQUENCES: 49
  APPLICANT: BILLING-MEDEL, PATRICIA COHEN, MAURICE
   1 EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
  STATE: IL
COUNTRY: USA
  EDSVDSAPPGORKKEOWYAGINPSDGINSEVLE 33
   STRANDEDNESS: single
  ZIP: 60064-3500
  CITY: Abbott Park
  Conservative
   COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN GRANADOS, EDWARD N.
  100.0%; Score 176; DB 4;
100.0%; Pred. No. 7.6e-16;
tive 0; Mismatches 0;
  Length 33;
  Length 33;
  Indels
        Indels
  0
        0,
    Gaps
  Сарв
  0
        0
```

```
ક
  밁
   US-10-106-698-4761
   Matchee
  Query Match
Best Local
  Publication No. US20030109690A1
GENERAL INFORMATION:
APPLICANT: Ruben et al.
TITLE OF INVENTION: Colon and Colon Cancer Associated Polynucleotides and Polypeptide
FILE REFERENCE: PA005P1
FILE REFERENCE: PA005P1
  PRIOR APPLICATION NUMBER: US 60/157,137 PRIOR FILING DATE: 1999-09-29
  CURRENT APPLICATION NUMBER: US/10/106,698
CURRENT FILING DATE: 2002-03-27
CURRENT APPLICATION NUMBER: PCT/US00/26524
   SOFTWARE: PatentIn Ver. 3.0
   PRIOR APPLICATION NUMBER: US 60/163,280
   PRIOR FILING DATE: 2000-09-28
  RIOR FILING DATE: 1999-11-03
  LOCATION: (116)
OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
  OTHER INFORMATION: Xea equals any of the naturally occurring L-amino acids NAME/KEY: MISC FEATURE LOCATION: (116)
  DRGANISM: Homo sapiens
  tent No.
  ID NO 4761
   TITLE OF INVENTION:
TITLE OF INVENTION:
  APPLICANT
  PPLICANT
   STREET:
   ADDRESSEE:
  114 EDXVDSAPPGORKKEOWYAGINPSDGINSEVLE 146
   4761, Application US/10106698 on No. US20030109690A1
   1 BDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
  US20010010904A1
  Similarity
                              Abbott Park
   EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE
   Application US/09050516
   100 Abbott Park Road
   Conservative
   ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D
   COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
   GRANADOS,
  COHEN, MAURICE
  BILLING-MEDEL, PATRICIA
   Abbott Laboratories
  ADDRESS
  CHVIL, JON D
  S, STEVEN C.
MICHAEL R.
  97.7%;
97.0%;
  MARK
   REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF T TRACT
  STEPHEN D
   EDWARD N.
   ..
  Score 172; DB 4;
Pred. No. 1.4e-14;
   Mismatches
  1.4e-14;
   w
  THE GASTROINTESTINAL
   Length 172;
   Indels
   0
   0
   뭉
  US-10-278-547-47
   RESULT 6
  Matches
  SOFTWARE:
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
  32;
  COMPUTER: IBM Compatible
  ZIP: 60064-3500
   CITY: Abbott Park
   COUNTRY: USA
```

```
Sequence 47, Application US/10278547 Publication No. US20030082619A1
   Query Match
Best Local Similarity
   INFORMATION FOR SEQ ID NO:
   MOLECULE TYPE:
   SEQUENCE CHARACTERISTICS
LENGTH: 215 amino acid
  REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
  PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/8
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
   COMPUTER READABLE FORM: MEDIUM TYPE: Diskett
   CURRENT APPLICATION DATA:
  COMPUTER: IBM CON OPERATING SYSTEM:
  APPLICATION NUMBER: US/09/050,516
   STRANDEDNESS:
  NAME: Becker, Cheryl REGISTRATION NUMBER:
  CLASSIFICATION:
   FILING DATE:
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
   TITLE OF INVENTION: REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF T
   NUMBER OF SEQUENCES: 49
   157 EDPVDSAPPGORKKEOWYAGINPSDGINSEVLE 189
  1 EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
  amino acid
   215 amino acide
   847/938-2623
   Conservative
  FastSEQ for Windows Version 2.0
  IBM Compatible
   Diskette
   BILLING-MEDEL, PATRICIA COHEN, MAURICE
  COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
   HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
   No. US20010010904A1e
   GRANADOS,
   single
  97.2%;
97.0%;
  08/828,855
  MARK
   STEVEN C.
  35,441
   EDWARD N.
  6065.US.P1
   Score 171; DB 3; Length 215; Pred. No. 2.5e-14;
   Mismatches
   OF THE GASTROINTESTINAL
   0
```

٥,

CLASSIFICATION: <Unknown>

```
밁
   б
  US-10-646-873-47
   RESULT 7
   US-10-278-547-47
   Matches
  Sequence 47, Application US/10646873 Publication No. US20040043406A1
   Query Match
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
   GENERAL INFORMATION
   Local Similarity
nes 32; Conserv
  CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/646,873
FILING DATE: 22-Aug-2003
CLASSIFICATION: <Unknown>
  COUNTRY: USA
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
  NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
   HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
   APPLICANT: BILLING-MEDEL, PATRICIA
COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
  TOPOLOGY: linear
MOLECULE TYPE: No. US20030082619A1e
SEQUENCE DESCRIPTION: SEQ ID NO: 47:
  NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 600
TELECOMMUNICATION INFORMATION:
  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: <UNKnown>
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
  ATTORNEY/AGENT INFORMATION:
   PRIOR
  157
  1 EDSVDSAPPGORKKEOWYAGINPSDGINSEVLE 33
  EDPVDSAPPGORKKEOWYAGINPSDGINSEVLE 189
APPLICATION NUMBER: US/09/050,516
FILING DATE: 30-MAR-1998
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
  COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
  CITY: Abbott Park
STATE: IL
   TYPE: amino acid
STRANDEDNESS: single
  TELEFAX: 847/938-2623
   APPLICATION DATA:
  LENGTH: 215 amino acids
   TELEPHONE: 847/935-1729
  Conservative
  GRANADOS,
   97.2%; Score 171; DB 4;
97.0%; Pred. No. 2.5e-14;
tive 0; Mismatches 1
   MARK
   FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  EDWARD N.
   6065.US.P1
   Length 215;
  0
  Gaps
  0
```

```
US-09-050-516-42
; Sequence 42, Application US/09050516
; Patent No. US20010010904A1
   밁
  RESULT 8
  US-10-646-873-47
   Matches
  Query Match
Best Local Similarity
   GENERAL INFORMATION
  COUNTRY: USA
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
  COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
  APPLICANT:
APPLICANT:
APPLICANT:
  APPLICANT
APPLICANT
   APPLICANT:
  APPLICANT:
APPLICANT:
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 600
TELECOMMUNICATION INFORMATION:
   TITLE OF INVENTION:
TITLE OF INVENTION:
  APPLICANT:
   APPLICANT:
  NUMBER OF SEQUENCES:
   APPLICANT:
  STREET: 100 Abbott
CITY: Abbott Park
  FILING DATE:
  TOPOLOGY: linear MOLECULE TYPE: No. US20040043406Ale SEQUENCE DESCRIPTION: SEQ ID NO: 47:
  REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEFAX: 847/938-2623
  ATTORNEY/AGENT INFORMATION:
   157 EDPVDSAPPGQRKKEQWYAGINPSDGINSEVLE 189
  1 EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
   LENGTH: 215 amino acids
TYPE: amino acid
STRANDEDNESS: single
   NAME: Becker, Cheryl L. REGISTRATION NUMBER: 35,441
   100 Abbott
  COHEN, MAURICE COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
   ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
   Conservative
   HODGES, STEVEN C.
KLASS, MICHAEL R.
   BILLING-MEDEL, PATRICIA
  KRATOCHVIL, JON D.
  GRANADOS,
  MARK
   97.2%;
   TRACT
   REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF TO
   Park Road
  EDWARD N.
  08/828,855
   <u>.</u>
                    6065.US.P1
  Score 171; DB 4;
Pred. No. 2.5e-14;
   Mismatches
   THE GASTROINTESTINAL
  Length 215;
   Indels
   0
```

0

0

```
RESULT 9
US-10-278-547-42
   US-09-050-516-42
   Best Local Similarity Matches 32; Conserv
   Sequence 42, Application US/10278547 Publication No. US20030082619A1
  Query Match
   INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 679 amino acid
                                    INFORMATION FOR SEQ ID NO: 42:
  MOLECULE TYPE: No. US20010010904A1e
   TELEPHONE:
TELEFAX: 8
TELEX:
   APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REGISTRATION NUMBER: 6065.US.P1
TELEPHONE: 847/935-1729
TELEPHONE: 847/935-1729
   STRANDEDNESS:
   TYPE: amino acid
  TOPOLOGY:
  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOPTWARE: FastSEQ for Windows Version 2.0
  HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
  PRIOR APPLICATION NUMBER: US/09/050,516
PILING DATE: <UNknown>
  APPLICANT: BILLING-MEDEL, PATRICIA COHEN, MAURICE COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
   CURRENT APPLICATION DATA:
SEQUENCE CHARACTERISTICS:
LENGTH: 679 amino acids
  CORRESPONDENCE ADDRESS:
   NUMBER OF SEQUENCES: 49
  621 EDPVDSAPPGORKKEOWYAGINPSDGINSEVLE 653
  1 EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
   APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
  ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
   ZIP: 60064-3500
   COUNTRY: USA
   TELEFAX: 847/938-2623
  679 amino acids
  847/935-1729
847/938-2623
   Conservative
  linear
   GRANADOS, EDWARD N.
   single
   97.2%;
  MARK
   TRACT
  FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   42:
   Score 171; DB 3;
Pred. No. 8.2e-14;
   Mismatches
  Length 679;
   Indels
   0
   Gaps
   0;
  밁
```

밁 ঠ

```
RESULT 10
US-10-646-873-42
SEQUENCE DESCRIPTION: SEQ ID NO: 42: US-10-646-873-42
  Query Match 97.2%;
Best Local Similarity 97.0%;
Matches 32; Conservative
  Sequence 42, Application US/10646873 Publication No. US20040043406A1
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 42:
SEQUENCE CHARACTERISTICS:
LENGTH: 679 amino acids
TYPE: amino acid
  HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL.
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   TOPOLOGY: linear MOLECULE TYPE: No. US20030082619Ale SEQUENCE DESCRIPTION: SEQ ID NO: 42:
  APPLICATION NUMBER: US/09/050,516
FILING DATE: 30-MAR-1998
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
   STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: No. US20040
   NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
  COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOPTMARE: PASTEM: DOS
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/646,873
PILING DATE: 22-AUg-2003
CLASSIFICATION: «Unknown»
  ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   CORRESPONDENCE ADDRESS:
   PRIOR APPLICATION DATA:
   621 EDPVDSAPPGORKKEOWYAGINPSDGINSEVLE 653
   1 EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
  ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
   STRANDEDNESS: single
  COUNTRY: USA
  TELEFAX: 847/938-2623
  BILLING-MEDEL, PATRICIA COHEN, MAURICE
  COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
   GRANADOS, EDWARD N.
  0
  Score 171; DB 4; Length 679
Pred. No. 8.2e-14;
0; Mismatches 1; Indels
  6065.US.P1
  0
```

```
밁
  S
   밁
   ; OTHER INFORMATION: Clone ID: MRT4577_154194C.1.pep
US-10-425-115-244090
  RESULT 12
US-10-425-115-244090
  US-10-029-386-33676
  US-10-029-386-33676
  RESULT 11
  CURRENT APPLICATION NUMBER: US/10/029,386
CURRENT FILING DATE: 2001-12-20
NUMBER OF SEQ ID NOS: 34288
SOFTWARE: Annomax Sequence Listing Engine vers. 1.1
SEQ ID NO 38676
SEQ ID NO 38676
TYPE: PRT
ORGANISM: Homo sapiens
   NUMBER OF SEQ ID NOS: 369326
SEQ ID NO 244090
LENGTH: 155
   Matches
  Sequence 33676, Application US/10029386 Publication No. US20030194704A1
   Matches
  Query Match
Best Local
  Sequence 244090, Application US/10425115 Publication No. US20040214272A1
  Query Match
                   Best Local Similarity
  Query Match
  GENERAL INFORMATION:
   Matches
  GENERAL INFORMATION:
   APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants
FILE REFERENCE: 38-21(53222)B
CURRENT APPLICATION NUMBER: US/10/425,115
CURRENT FILING DATE: 2003-04-28
   APPLICANT: Hanzel, David K.
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR
TITLE OF INVENTION: EXPRESSION ANALYSIS TWO
FILE REFERENCE: AEOMICA-X-2
  APPLICANT: Penn, Sharron G. APPLICANT: Rank, David R. APPLICANT: Hanzel, David K
  APPLICANT: La Rosa, Thomas J. APPLICANT: Kovalic, David K.
  FEATURE:
OTHER INFORMATION: MAP TO AC004030.1
OTHER INFORMATION: EXPRESSED IN HELA,
   NAME/KEY: unsure
LOCATION: (1)..(155)
OTHER INFORMATION: unsure at
   FEATURE:
  ORGANISM: Zea mays
   TYPE: PRT
  Local Similarity
  Local
   621 EDPVDSAPPGQRKKEQWYAGINPSDGINSEVLE 653
  27
   16; Conservative
   1 EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
   32;
  1 EDSVDSAPPGORKKEOW 17
  50.6%;
Similarity 94.1%;
  EDPVDSAPPGORKKEOW 43
   Conservative
34.1%; Score 60; DB 4; Length 155; 61.1%; Pred. No. 7.5; ative 1; Mismatches 6; Indels
  97.2%;
   ; Score 89; DB; Pred. No. 0.00
   all Xaa locations
   Score 171; DB 4;
Pred. No. 8.2e-14;
0; Mismatches 1
  SIGNAL = 0.42
  0.00029
  DB 4; Length 43;
   1; Indels
  Length 679;
   Indels
   0
 0
   0,
 Gaps
   Gaps
   Gaps
   0
   0
   0
   片
  5
   밁
  S
```

```
Ś
  RESULT 13
US-09-301-593-8
  US-09-301-593-10
   US-09-301-593-10
   US-09-301-593-8
  GENERAL INFORMATION:

GENERAL INFORMATION:

APPLICANT: Park, John B.

APPLICANT: Garin-Chesa, Pilar

APPLICANT: Bamberger, Uwe

APPLICANT: Baldanha, Jose W.

APPLICANT: Rettig, Wolfgang J.

APPLICANT: Rettig, Wolfgang J.

TITLE OF INVENTION: PAP-specific Antibody with Improved Producibility

FILE REFERENCE: 0652.1890001

CURRENT FILING DATE: 1999-04-29

EARLIER APPLICATION NUMBER: EP 98107925.4

EARLIER FILING DATE: 1998-04-30

EARLIER FILING DATE: 1998-04-30

EARLIER FILING DATE: 1998-04-30
   EARLIER FILING DATE: 1998-05-18
NUMBER OF SEQ ID NOS: 108
SOFTWARE: PATENTIN VEY: 2.0
SEQ ID NO 8
   Sequence 8, Application US/09301593A Publication No. US20020052480A1
  SEQ ID NO 10
  Sequence 10, Application US/09301593A Publication No. US20020052480A1
   GENERAL INFORMATION
   Matches
  Query Match
Best Local
                                    Matches
  Best Local Similarity
   Query Match
   APPLICANT: Saldanha, Jose W.
APPLICANT: Rettig, Wolfgang J.
TITLE OF INVENTION: FAP-Specific Antibody with Improved Producibility
FILE REFERENCE: 0652.1890001
CURRENT APPLICATION NUMBER: US/09/301,593A
CURRENT FILING DATE: 1999-04-29
EARLIER APPLICATION NUMBER: EP 98107925.4
EARLIER APPLICATION NUMBER: US 60/086,049
  APPLICANT: Park, John B.
APPLICANT: Garin-Chesa, Pilar
APPLICANT: Bamberger, Uwe
APPLICANT: Leger, Olivier
   EARLIER APPLICATION NUMBER: US 60/086,049
EARLIER FILING DATE: 1998-05-18
NUMBER OF SEQ ID NOS: 108
  SOFTWARE: Patentin
   LENGTH: 12
TYPE: PRT
  ORGANISM: Homo sapiens
  TYPE: PRT
ORGANISM: Homo
   LENGTH:
  ocal Similarity
   41
                                    11,
   124
  9 PGQRKKEQWYAGINPSDGI 27
9 PGQRKKEQWYAGINPSDGI 27
   PGORL--EWIGGINPNNGI
  SEAPGRRKKHSWLAGIMP 19
   SAPPGORKKEOWYAGINP
                                    Conservative
   Conservative
  Ver.
  32.4%;
  32.4%;
   ω
•
   23
                                  ω
•
  Score 57;
Pred. No.
  Score 57; DB
Pred. No. 15;
   57
                                    Mismatches
   Mismatches
  ω
--
   ω
--
   ۳.
  Length 124;
   Length 124;
   Indels
                                    Indels
                                    <u>ب</u>
   2;
   Gaps
                                    Gaps
   ۳.
                                    1;
```

밁

41 PGQRL--EWIGGINPNNGI 57

```
APPLICANT: Saldania, Jose W.
APPLICANT: Rettig, Wolfgang J.
TITLE OF INVENTION: FAP-specific Antibody with Improved Producibility
FILE REFERENCE: 0652.1890001
CURRENT APPLICATION NUMBER: US/09/301,593A
CURRENT FILING DATE: 1999-04-29
EARLIER APPLICATION NUMBER: EP 98107925.4
EARLIER FILING DATE: 1998-04-30
EARLIER FILING DATE: 1998-04-30
EARLIER PILING DATE: 1998-05-18
NUMBER OF SEQ ID NOS: 108
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 12
LENGTH: 124
TYPE: PAT
ORGANISM: Homo sapiens
  RESULT 15
US-09-301-593-12
US-09-301-593-12
Sequence 12, Application US/09301593A
Publication No. US20020052480A1
GENERAL INFORMATION:
   В
Search completed: March 3, 2006, 14:18:11 
Job time: 15.4956 secs
   ঠ
   Query Match 32.4%; Score 57; DB 3; Best Local Similarity 57.9%; Pred. No. 15; Matches 11; Conservative 3; Mismatches
   APPLICANT: Park, John B.
APPLICANT: Garin-Chesa, Pilar
APPLICANT: Bamberger, Uwe
APPLICANT: Leger, Olivier
   9 PGQRKKEQWYAGINPSDGI 27
|||| :| |||::||
41 PGQRL--EWIGGINPNNGI 57
  3; Indels
  Length 124;
   2; Gaps
  1;
```

(Older) Millore Sold Si

```
Minimum DB
Maximum DB
   Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries
  Scoring table:
   Sequence:
   OM protein -
   Total number of hits satisfying chosen parameters:
  Perfect score:
   Title:
   Result
   Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
  Score
   46.5
   47.5
47.5
  seq length: 0
seq length: 2000000000
   protein search, using sw model
   BLOSUM62
Gapop 10.0 , Gapext 0.
  March 3, 2006, 14:10:51; Search time 1.57143 Seconds (without alignments) 420.009 Million cell updates/sec
  US-10-646-873-46
176
  Match
   135346 segs, 20000420 residues
  1 EDSVDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
  227.3
227.3
227.3
227.3
227.3
227.3
227.3
227.3
227.3
227.3
227.3
227.3
227.3
227.3
227.3
227.3
227.3
227.3
227.3
  GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd
  Length
  _6/ptodata/1/pubpaa/US60_NEW_PUB.pep:*
   멂
   US-10-517-939-312

US-10-467-657-6312

US-11-087-099-7589

US-11-171-701-6

US-11-171-701-6

US-11-171-701-6

US-11-087-099-11149

US-11-087-099-6422

US-11-087-099-6422

US-11-087-099-7589

US-11-087-099-7589
  US-11-049-536-598
US-11-087-099-11044
US-10-982-545-15
   US-11-087-099-4390
US-11-025-712-12
US-10-821-234-1219
   US-11-087-099-3875
US-11-087-099-10589
US-11-087-099-4390
  SUMMARIES
  Description
  Sequence
Sequence
  Sequence
Sequence
   Sequence 598,
  Sequence
  Sequence
  Sequence
   Sequence
   Sequence
  Sequence
   Sequence
   Sequence
  Sequence
   Sequence
  Sequence
   e 598, App
11044, A
11044, A
11044, A
11044, A
1104, Appl
10, Appl
10, Appl
10, Appl
10589, A
   1219, Ap
6312, Ap
6312, Ap
168, Ap
16, Appli
16, Appli
11149, Ap
1412, Ap
1564, Ap
17653, Ap
  Appl
3, Ap
7, Ap
  밁
   ঠ
  US-11-049-536-598
  Sequence 598, 1
Publication No
   GENERAL
  APPLICANT:
   APPLICANT:
  APPLICANT: Wood,
```

| 45                  | 44                 | 43                | 42               | 41                | 40                 | 9                   | 38                 | 37                 | 36                 | ω<br>5            | 34                 | ω<br>G             | 32                 | 31                 | 30                 | 29                | 28               | 27                 | 26                 |
|---------------------|--------------------|-------------------|------------------|-------------------|--------------------|---------------------|--------------------|--------------------|--------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------|------------------|--------------------|--------------------|
| 44                  | 44                 | 44                | 44               | 44                | 44.5               | 44.5                | 44.5               | 44.5               | 44.5               | 44.5              | 44.5               | 44.5               | 44.5               | 45                 | 45                 | 45                | 45               | 45                 | <b>4</b>           |
|                     |                    |                   |                  | 25.0              |                    |                     | 25.3               |                    |                    |                   |                    | 25.3               | 25.3               | 25.6               |                    |                   | տ                | 25.6               | σ.                 |
| 365                 | 363                | 123               | 123              | 121               | 481                | 378                 | 372                | 357                | 356                | 356               | 355                | 354                | 196                | 4961               | 4913               | 695               | 545              | 359                | 356                |
| 7                   | 7                  | 7                 | 7                | 7                 | 7                  | 7                   | 7                  | 7                  | 7                  | 7                 | 7                  | 7                  | 7                  | თ                  | σ                  | σ                 | 7                | δ                  | 7                  |
| US-11-087-099-10907 | US-11-087-099-9995 | US-11-112-304A-14 | US-11-112-240-14 | US-11-049-536-682 | US-11-087-099-4975 | US-11-087-099-11797 | US-11-087-099-2822 | US-11-087-099-5974 | US-11-087-099-5763 | US-11-087-099-846 | US-11-087-099-5542 | US-11-087-099-1806 | US-11-087-099-8247 | US-10-453-372-1132 | US-10-453-372-1142 | US-10-363-924-2   | US-11-134-563-16 | US-10-821-234-1396 | US-11-087-099-5793 |
| Sequence 10907, A   |                    |                   | 14,              | N                 |                    | Sequence 11797, A   | Sequence 2822, Ap  | Sequence 5974, Ap  | Sequence 5763, Ap  | Sequence 846, App |                    | Sequence 1806, Ap  |                    |                    | Sequence 1142, Ap  | Sequence 2, Appli | 16               | Sequence 1396, Ap  | Sequence 5793, Ap  |

## ALIGNMENTS

INFORMATION

Application US/11049536 b. US20060024297A1

Hoet, Rene Pieters, Henk Dransfield,

Daniel T.

```
US-11-087-099-11044
   US-11-049-536-598
   Query Match
Best Local S
Matches 11
  Sequence 11044, Application US/11087099
Publication No. US20060041961A1
GENERAL INFORMATION:
   SOPTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 598
   PRIOR APPLICATION NUMBER: US 10/916,840
PRIOR FILING DATE: 2004-08-12
PRIOR APPLICATION NUMBER: US 60/494,713
PRIOR FILING DATE: 2003-08-12
NUMBER OF SEO ID NOS: 721
APPLICANT: Abad, Mark S. et al.
TITLE OF INVENTION: Genes and Uses for Plant Improvement
FILE REFERENCE: 38-21(53450)B EP
CURRENT APPLICATION NUMBER: US/11/087,099
CURRENT FILING DATE: 2005-03-22
  FILE REFERENCE: 10280-128001
CURRENT APPLICATION NUMBER: US/11/049,536
CURRENT FILING DATE: 2005-02-02
  APPLICANT: Hufton, Simon E.
TITLE OF INVENTION: TIE COMPLEX BINDING PROTEINS
   TYPE: PRT
ORGANISM: ARTIFICIAL SEQUENCE
FEATURE:
  OTHER INFORMATION: Antibody
  LENGTH: 120
  41
   9 PGQRKKEQWYAGINPSDGINS 29
   Similarity
  PG--KGLEWVSGISPSGGITS
  Conservative
   28.4%; Score 50; 52.4%; Pred. No.
  ω
-
  59
  Mismatches
  DB 7;
  Length 120;
  Indels
  2
  Gaps
```

SEQ ID NO 11044

```
밁
   US-10-982-545-15
  S
   ; LENGTH: 356
TYPE: PRT
; ORGANISM: Nicotiana plumbaginifolia
US-11-087-099-11044
   SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 15
LENGTH: 770
TYPE: PRT
ORGANISM: Homo sapiens
   Sequence 15, Application US/10982545 Publication No. US20050244890A1
  Query Match
  GENERAL INFORMATION:
  PRIOR APPLICATION NUMBER: US 60/558,896
PRIOR FILING DATE: 2004-04-02
PRIOR APPLICATION NUMBER: US 60/572,617
PRIOR FILING DATE: 2004-05-18
PRIOR APPLICATION NUMBER: US 60/586,503
   CURRENT FILING DATE: 2004-11-06
PRIOR APPLICATION NUMBER: US 60/518,360
PRIOR FILING DATE: 2003-11-07
  CURRENT APPLICATION NUMBER: US/10/982,545
CURRENT FILING DATE: 2004-11-06
   PRIOR FILING DATE: 2004-07-08
NUMBER OF SEQ ID NOS: 16
  PRIOR APPLICATION NUMBER: US 60/546,423
PRIOR FILING DATE: 2004-02-19
PRIOR APPLICATION NUMBER: US 60/547,250
PRIOR FILING DATE: 2004-02-23
   PRIOR APPLICATION NUMBER: US 60/526,753 PRIOR FILING DATE: 2003-12-02
   FILE REFERENCE: 016866-011550US
   APPLICANT: Ciphergen Biosystems, Inc.
TITLE OF INVENTION: Biomarkers for Alzheimer's Disease
   APPLICANT:
  APPLICANT:
   APPLICANT: Davies,
APPLICANT: McGuir
  PEATURE: OTHER INFORMATION: Amyloid beta A4 precursor (APP, ABPP), isoform a, protease OTHER INFORMATION: nexin II (PN-II), cerebral vascular amyloid peptide (CVAP), OTHER INFORMATION: amyloid-beta protein, beta-amyloid peptide, A4 amyloid protein, OTHER INFORMATION: Alzheimer's disease amyloid protein
   LOCATION: (18)..(687)
OTHER INFORMATION: 80
   LOCATION: (1)..(40)
OTHER INFORMATION: biomarker peptide 4320 Da (IMAC-Ni), A-beta 1-40
OTHER INFORMATION: peptide fragment of Amyloid beta A4 precursor
   NAME/KEY: SIGNAL
LOCATION: (1)..(17)
OTHER INFORMATION: signal peptide
                       NAME/KEY: PEPTIDE
LOCATION: (18)..(671)
  PEATURE:
   NAME/KEY: PEPTIDE
   / Match 27.8%;
Local Similarity 51.6%;
hes 16; Conservative
INFORMATION: soluble APP-beta
   170 DIVDS-----HYKAYLYAGINIS-GINGEVM 194
   2 DSVDSAPPGQRKKEQWYAGINPSDGINSEVL 32
  Simonsen, Au
Simonsen, Au
   McGuire, James
  Blennow, Kaj
Podust, Vladimir
   Huw Alun
   soluble
  Anja Hviid
   APP-alpha
   ; Score 49; DB; Pred. No. 16; 1; Mismatches
   DB 7;
16;
  Length 356;
  6,
  Gaps
  2
```

```
APPLICANT: Basi, Guriq
APPLICANT: Saldanha, Jose
APPLICANT: Saldanha, Jose
APPLICANT: Saldanha, Jose
TITLE OF INVENTION: HUMANIZED ANTIBODIES THAT RECOGNIZE
TITLE OF INVENTION: BETA-AMYLOID PEPTIDE
FILE REFERENCE: ELN-002CP
CURRENT APPLICATION NUMBER: US/10/789,273
CURRENT FILING DATE: 2004-02-27
PRIOR APPLICATION NUMBER: US/10/388,389
PRIOR FILING DATE: 2003-03-12
PRIOR APPLICATION NUMBER: US 10/010,942
PRIOR APPLICATION NUMBER: US 60/251,892
PRIOR APPLICATION NUMBER: US 60/251,892
PRIOR APPLICATION NUMBER: US 60/251,892
PRIOR FILING DATE: 2000-12-06
NUMBER OF SEQ ID NOS: 63
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 38
   US-10-789-273-38
  밁
   8
  RESULT 4
  US-10-982-545-15
  Sequence 38, Application US/10789273
Publication No. US20050249725A1
  GENERAL INFORMATION:
   Matches
   Query Match
Best Local Similarity
   FEATURE:
NAME/KEY: PEPTIDE
LOCATION: (714)..(770)
OTHER INFORMATION: gamma-CTF(57)
   NAME/KEY: PEPTIDE
LOCATION: (712)..(770)
OTHER INFORMATION: Gamma-CTF(59)
  NAME/KEY: PEPTIDE LOCATION: (688)..(713) OTHER INFORMATION: P3 (42)
  LOCATION: (672)..(711)
OTHER INFORMATION: biomarker peptide 4330 Da, fragment of Amyloid
OTHER INFORMATION: beta A4 precursor, beta-amyloid protein 40
  LOCATION: (740)..(770)
OTHER INFORMATION: C31
   FEATURE:
NAME/KEY: PEPTIDE
   LOCATION: (721)..(770)
OTHER INFORMATION: gamma-CTF(50)
   FEATURE:
NAME/KEY: PEPTIDE
  NAME/KEY: PEPTIDE
LOCATION: (688)..(711)
OTHER INFORMATION: P3(40)
  NAME/KEY: PEPTIDE
LOCATION: (688)..(770)
OTHER INFORMATION: C83
  LOCATION: (672)..(713)
OTHER INFORMATION: beta-amyloid protein
  NAME/KEY: PEPTIDE
LOCATION: (672)..
  FEATURE:
NAME/KEY: PEPTIDE
  OTHER INFORMATION:
  194 DNVDSADAEEDDSDVWWGGADTDYADGSEDKVVE 227
   DSVDSAPPGQRKKEQWYAGINP--SDGINSEVLE 33
  27.8%;
ilarity 32.4%;
Conservative
   )..(770)
ION: C99
   8
   Score 49; DB 6;
Pred. No. 34;
8; Mismatches 1
   13;
  Length 770;
   Indels
   2
   Gaps
```

۲.

LENGTH: 770

```
밁
   ঠ
  ; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-789-273-38
  RESULT 5
   US-11-025-712-10
밁
                                S
   Sequence 10, Application US/11025712
Publication No. US20050255108A1
GENERAL INFORMATION:
   Query Match 27.8
Best Local Similarity 32.4
Matches 11; Conservative
   Query Match
   Matches
  INFORMATION FOR SEQ ID NO: 10:
   Local Similarity 55.0
   FILING DATE: 17-FEB-2000
APPLICATION NUMBER: 08/788800
FILING DATE: 22-JAN-1997
APPLICATION NUMBER: 60/993038
FILING DATE: 23-JAN-1996
ATTORNEY/AGENT INFORMATION:
  COMPUTER READABLE FORM:

MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Winderin (Genentech)

CURRENT APPLICATION DATA:
  Thomas, G. Roger
Gross, Cordell E.
TITLE OF INVENTION: ANTI-CD18 ANTIBODIES IN STROKE
NUMBER OF SEQUENCES: 15
  NAME: Evans, David W.
REGISTRATION NUMBER: NONE
REFERENCE DOCKET NUMBER: P1729C2
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650/225-1739
   PRIOR APPLICATION DATA:
   CORRESPONDENCE ADDRESS:
  APPLICANT: Bednar, Martin M.
   SEQUENCE CHARACTERISTICS:
  SEQUENCE DESCRIPTION: SEQ ID NO: 10:
   194 DNVDSADAEEDDSDVWWGGADTDYADGSEDKVVE 227
   DSVDSAPPGQRKKEQWYAGINP--SDGINSEVLE 33
  APPLICATION NUMBER: US/11/025,712 FILING DATE: 28-Dec-2004 CLASSIFICATION: <Unknown>
   CITY: South San F
STATE: California
                                   PGQRKKEQWYAGINPSDG 26
   APPLICATION NUMBER: US/10/404,286
FILING DATE: 31-Mar-2003
APPLICATION NUMBER: 09/811384
FILING DATE: 20-DEC-2000
   ADDRESSEE: Genentech, Inc
STREET: 1 DNA Way
   PG--KGLEWVAGINPKNG 56
  TYPE: Amino Acid
  ZIP: 94080
   COUNTRY: USA
   TELEFAX: 650/952-9881
  APPLICATION NUMBER: 09/251652
  27.3%;
55.6%;
  27.8%;
  Francisco
   8
  Score 49;
Pred. No.
  Score 48; DB 7; Length 232; Pred. No. 14;
   Mismatches
   Mismatches
   DB 6;
  13;
   4.
  Length 770;
   Indels
  Indels
  2
   2; Gaps
  Gaps
  ۲,
```

```
片
   ORGANISM: Lupinus angustifolius US-11-087-099-3875
   US-11-087-099-3875
   RESULT 6
   Ś
  RESULT 7
   밁
  US-11-087-099-10589
  ÚS-11-087-099-10589
   ; ORGANISM: Hevea brasiliensis
US-11-087-099-4390
   US-11-087-099-4390
   Sequence 3875, Application US/11087099
Publication No. US20060041961A1
GENERAL INFORMATION:
APPLICANT: Abad, Mark S. et al.
TITLE OF INVENTION: Genes and Uses for Plant Improvement
FILE REFERENCE: 38-21(53450)B EP
CURRENT APPLICATION NUMBER: US/11/087,099
CURRENT FILING DATE: 2005-03-22
NUMBER OF SEC. 1505-03-22
   Query Match
Best Local Similarity 51.6
Conservative
  Sequence 10589, Application US/11087099
publication No. US20060041961A1
GENERAL INFORMATION:
APPLICANT: Abad, Mark S. et al.
TITLE OF INVENTION: Gennes and Uses for Plant Improvement
FILE REFERENCE: 38-21(53450)B EP
CURRENT APPLICATION NUMBER: US/11/087,099
CURRENT FILING DATE: 2005-03-22
   NUMBER OF SEQ ID NOS: 12464
SEQ ID NO 3875
LENGTH: 315
   NUMBER OF SEQ ID NOS: 12464
SEQ ID NO 4390
LENGTH: 356
TYPE: PRT
  NUMBER OF SEQ ID NOS: 12464
SEQ ID NO 10589
   GENERAL INFORMATION:
APPLICANT: Abad, Mark S. et al.
TITLE OF INVENTION: Genes and Uses for Plant Improvement
FILS REFERENCE: 38-21(53450) B EP
CURRENT APPLICATION NUMBER: US/11/087,099
CURRENT FILING DATE: 2005-03-22
  Query Match 27.3%;
Best Local Similarity 51.6%;
Matches 16; Conservative
   Sequence 4390, Application US/11087099 Publication No. US20060041961A1
Query Match
Best Local Similarity
  ORGANISM: Lupinus luteus
  TYPE: PRT
   TYPE: PRT
  LENGTH: 353
  170 DIVDS-----HYKACLYAGINIS-GINAEVM 194
   170 DIVDS-----HYKACLYAGINIS-GINAEVM 194
   2 DSVDSAPPGQRKKEQWYAGINPSDGINSEVL 32
   2 DSVDSAPPGQRKKEQWYAGINPSDGINSEVL 32
   27.3%;
   27.3%;
51.6%;
   2
  2
   Score 48;
Pred. No.
  Score 48; DB 7;
Pred. No. 22;
 Score 48;
Pred. No.
  Mismatches
   Mismatches
DB
. 22;
   19;
   DB 7;
  Length 353
   Length 315;
                     Length 356
   Indels
  6.
   6
  Gaps
   Gaps
```

2

2

밁 S

1;

```
RESULT 10
US-10-921-234-1219
; Sequence 1219, Application US/10821234
; Publication No. US20050255114A1
; GENERAL INFORMATION:
  RESULT 9
US-11-025-712-12
   ; SEQUENCE DESCRIPTION: SEQ ID NO: 12: US-11-025-712-12
  Sequence 12, Application US/110 Publication No. US20050255108A1 GENERAL INFORMATION:
   Query Match
Best Local Similarity
Matches 10; Conserv
   Matches
  INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
   TELECOMMUNICATION INFORMATION:
TELEPHONE: 650/225-1739
TELEFAX: 650/952-9881
  SOFTWARE: WinPatin (Genentech)
CURRENT APPLICATION DATA:
   COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb :
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
   ATTORNEY/AGENT INFORMATION:
   PRIOR
   CORRESPONDENCE ADDRESS:
   Thomas, G. Roger
Gross, Cordell E.
TITLE OF INVENTION: ANTI-CD18 ANTIBODIES IN STROKE
NUMBER OF SEQUENCES: 15
  APPLICANT: Bednar, Martin M.
  170
   41
   2 DSVDSAPPGORKKEOWYAGINPSDGINSEVL 32
   16; Conservative
   PG--KGLEWVÄGINPKNG 56
  PGQRKKEQWYAGINPSDG 26
  LENGTH: 450 amino acids
TYPE: Amino Acid
TOPOLOGY: Linear
   NAME: Evans, David W.
REGISTRATION NUMBER: NONE
REFERENCE/DOCKET NUMBER: P1729C2
   CLASSIFICATION: <Unknown>
R APPLICATION DATA:
  APPLICATION NUMBER: US/11/025,712 FILING DATE: 28-Dec-2004
  STATE: California
   STREET: 1 DNA Way
  DVVDS-----HYKSCLYAGINIS-GINGEVM 194
   APPLICATION NUMBER: US/10/404,286
FILING DATE: 31-Mar-2003
APPLICATION NUMBER: 09/811384
FILING DATE: 20-DEC-2000
   APPLICATION NUMBER: 60/093038 FILING DATE: 23-JAN-1996
  APPLICATION NUMBER: 09/251652 FILING DATE: 17-FEB-2000
   CITY: South San Francisco
   APPLICATION NUMBER: 08/788800 FILING DATE: 22-JAN-1997
   Application US/11025712
   Conservative
   94080
  Genentech, Inc
  27.3%;
  inch, 1.44 Mb floppy disk
  Score 48;
Pred. No.
   2
   1; Mismatches
   Mismatches
  DB 7;
   4
   8
  Length 450;
   Indels
   Indels
   6,
   2
   Gaps
   Gaps
   2
   ۲
RESULT 12
US-10-467-657-6312
; Sequence 6312, Application US/10467657
  밁
   Ś
  ; FEATURE:
; NAME/KEY: SIGNAL
; LOCATION: (1)...(33)
US-10-517-939-312
   밁
  S
   ; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-821-234-1219
  US-10-517-939-312
   NUMBER OF SEQ ID NOS: 1704
SOFTWARE: pt SEQ genes Version 1.0
SEQ ID NO 1219
LENGTH: 1133
   SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 312
  Best Local Similarity
Matches 9; Conserv
   Query Match
   Sequence 312, Appropriate Publication No.
   Matches
  Query Match
  APPLICANT: Esteghlalian, Alireza
TITLE OF INVENTION: XYLANASES, NUCLEIC ACIDS ENCODING THEM
TITLE OF INVENTION: AND METHODS FOR MAKING AND USING THEM
FILE REFERENCE: 564462007901
CURRENT APPLICATION NUMBER: US/10/517,939
CURRENT FILING DATE: 2004-12-13
PRIOR APPLICATION NUMBER: PCT/US03/19153
PRIOR APPLICATION NUMBER: PCT/US03/19153
PRIOR APPLICATION NUMBER: 60/389,299
PRIOR APPLICATION NUMBER: 60/389,299
   APPLICANT: Steer, Brian APPLICANT: Callen, Wal APPLICANT: Healey, Sha
   CURRENT APPLICATION NUMBER: US/10/821,234
CURRENT FILING DATE: 2004-04-07
PRIOR APPLICATION NUMBER: US 60/462,047
PRIOR FILING DATE: 2003-04-07
   NUMBER OF SEQ ID NOS:
  APPLICANT:
  APPLICANT: Tang, Y. Tom
TITLE OF INVENTION: Methods for Diagnosis and Treatment of Preeclampsia
   APPLICANT: Labat,
   PRIOR FILING DATE:
  FILE REFERENCE: 821A
   APPLICANT:
  FEATURE: OTHER INFORMATION: Obtained from an environmental sample.
   APPLICANT:
  TYPE: PRT
ORGANISM: Unknown
   LENGTH: 1323
   Local Similarity 35.7%; es 10; Conservative
   INFORMATION:
  652
   2 DSVDSAPPGQRKKEQWYAGINP---SDGINSEVL 32
  1 EDSVDSAPPGORKKE-OWYAGINPSDGI 27
   KSAVAQAPEGARPSDPAWPAGLGPGPGL 31
  EAIDENOPDGYRRSEWYRILGPTDTTDGIPEYIL
   Callen, Walter
Healey, Shaun
  Hazlewood, Geoff
   Andarmani,
  Stache-Crain, Birgit
   Blum, David
   Application US/10517939 o. US20060003433A1
  Conservative
   2002-06-14
  27.0%;
   Susan
  9;
   υ
••
  Score 47.5;
Pred. No. 92;
  Score 47.5;
Pred. No. 79;
   Mismatches
  Mismatches
   DB 6;
  DB 6;
  685
  13;
   12;
   Length 1323;
  Length 1133;
   Indels
   ۲,
  Gaps
   Gaps
```

Ş

1;

밁

US20050260581A1

```
밁
  밁
   US-11-087-099-7589
   RESULT 13
  US-10-485-517-166
; Sequence 166, Application US/10485517
; Publication No. US20050256299A1
   US-10-467-657-6312
   ) ORGANIŚM: Nicotiana tabacum
JS-11-087-099-7589
   APPLICANT: Abad, Mark S. et al.
TITLE OF INVENTION: Genes and Uses for Plant Improvement
FILE REFERENCE: 38-21(53450)B EP
CURRENT APPLICATION NUMBER: US/11/087,099
CURRENT FILING DATE: 2005-03-22
NUMBER OF SEQ ID NOS: 12464
SEQ ID NO 7589
LENGTH: 356
  Best Local Similarity 35.: Matches 11; Conservative
   Query Match
Best Local Similarity
   GENERAL INFORMATION:
   Sequence 7589, Application US/11087099 Publication No. US20060041961A1
   Query Match
Best Local Similarity
   SOFTWARE: SeqWin99,
SEQ ID NO 6312
   Matches
   GENERAL INFORMATION:
  APPLICANT: Mond, James
TITLE OF INVENTION: Antigenic Polypeptides
FILE REFERENCE: P100629WO
CURRENT APPLICATION NUMBER: US/10/485,517
CURRENT FILING DATE: 2004-02-02
  PRIOR FILING DATE: 2001-02-12
NUMBER OF SEQ ID NOS: 9218
  CURRENT APPLICATION NUMBER: US/10/467,657
CURRENT FILING DATE: 2003-08-11
PRIOR APPLICATION NUMBER: GB-0103424.8
PRIOR APPLICATION NUMBER: GB 0118825.9 PRIOR PILING DATE: 2001-08-02 PRIOR PILING DATE: C001-08-02 PRIOR FILING DATE: 2002-01-09
  APPLICANT: University of Sheffield APPLICANT: Biosynexus Incorporated
   ORGANISM: Neisseria gonorrhoeae
   JEANT: MONACI Elisabetta
JE OF INVENTION: GONOCOCCAL PROTEINS AND NUCLEIC ACIDS
   INFORMATION:
  170 DIVDS-----HYKACLYAGINIS-GINGEVM 194
   82 RELEEWLAGONPLVRKAFNDALKDGTAAEVI 112
   12 RKKEOWYAGINP-----SDGINSEVL 32
   2 DSVDSAPPGQRKKEQWYAGINPSDGINSEVL 32
   16; Conservative
  PIZZA Mariagrazia
   FONTANA Maria Rita
  MASIGNANI Vega
   Biosynexus Incorporated Foster, Simon
  version 1.04
   26.7%;
51.6%;
   26.7%;
  4; Mismatches
   1; Mismatches
   Score 47;
Pred. No.
   Score 47; DB 7;
Pred. No. 30;
   DB 6;
16;
  6
   8
   Length 186
  Length 356
  Indels
  10;
   6
  Gaps
   Gaps
  1;
   2
```

```
RESULT 15
US-11-171-701-6
  밁
   Query Match
Best Local Similarity
Thes 12; Conserva
   ; TYPE: PRT; ORGANISM: Staphylococcus aureus US-10-485-517-166
                           δ
  ; LENGTH: 988
TYPE: PRT
; ORGANISM: Aspergillus fumigatus
US-11-171-701-6
밁
   NUMBER OF SEQ ID NOS: 424
SOFTWARE: PatentIn version 3.1
SEQ ID NO 166
   SOFTWARE: PatentIn version 3.2 SEQ ID NO 6
   Sequence 6, Application US/11171701 Publication No. US20060008879A1
   Query Match
  Matches
  GENERAL
  CURRENT APPLICATION NUMBER: CURRENT FILING DATE: 2005-0
  PRIOR FILING DATE: 2005-
NUMBER OF SEQ ID NOS: 26
   PRIOR APPLICATION NUMBER: 60/585,336
  APPLICANT: Otani,
   FILE REFERENCE: 10655.200-US
  ITLE OF INVENTION: Polypeptides Having Alpha-Glucosidase Activity And ITLE OF INVENTION: Polypucleotides Encoding Same
   ENGTH: 375
  Local Similarity
  INFORMATION
 807
  71 KDEKSGAQVGPNFEGINSEVLE 92
  13 KKEQWYAGINPS-DGINSEVLE 33
  10;
                            2 DSVDSAPPGQRKKEOWY----AGINPSDGINSEV 31
 DTVKGVFPGVGKGEVWYDWYTQTAVDAKPGVNATI 841
   Yaver, Debbie
   Blinkovsky, Alexander
  Conservative
   Conservative
  Haiyan
  Suzanne
  2005-06-29
  Paul
  2005-06-29
  26.4%;
54.5%;
   26.4%;
   US/11/171,701
   Score 46.5; Di
Pred. No. 95;
6; Mismatches
  4; Mismatches
   6;
  Score 46.5;
Pred. No. 3
   贸
  DB 7;
  14;
   6
   Length 988;
   Length 375;
  Indels
   ۲.
  5
   Gaps
  Gaps
```

Search completed: March 3, 2006, 14:19:05 Job time: 1.57143 secs

1;

Color wood Sod sid.

ŝ

protein -95:

protein search, using

ew model

GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.

March

3, 2006, 13:19:17;

Search time 114.917 Seconds (without alignments) 822.038 Million cell updates/sec

```
127.5
127.5
127.5
127.5
127.5
127.5
127.5
127.5
127.5
  171
171
146
146
                  111.3
11.0
10.4
10.4
10.1
   15
12
12
12
   ٠,
  . 9 . 1
ADJ70212
ADD45973
ADJ75439
   ADA26383
ADN17176
AAW79678
AAE07321
ADA26381
ADN17174
ABM85635
ABP75463
ADY14900
ABG06360
             ADJ75352
ADP54378
ADP55745
ADP23410
ADP23408
ADP23408
ADY14898
ADY18598
ADA55374
   Add45973
Adj75439
Adj75352
   Aae07321
Ada26381
Adn17174
Abm85635
Adj70212
   Ada26383
Adn17176
Aaw79678
                   Ady14898
Ady18598
   Synthetic
CS198 pep
Human pro
Human hea
   Synthetic
CS198 pep
Synthetic
     Human Pro
Marker ge
Marker ge
Human PRO
PRO polyp
PRO polyp
PRO polyp
PRO polyp
PRO polyp
Human pro
Human pro
Human gec
PRO polyp
 Novel
  Human
  S
```

## ALIGNMENTS

Minimum DB Maximum DB

seq length: 0 seq length: 2000000000

Searched:

Total number of hits satisfying chosen parameters:

2443163

2443163 seqs, 439378781 residues

Scoring table: sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5

Perfect score:

US-10-646-873-47 1132

MSPRHLSESSGKPLSTKQEA....

....HKNAMAERWESRIYASEEDD

215

Post-processing: Minimum Maximum Listing

n Match 0% n Match 100 y first 45

100%

**summaries** 

Database

A\_Geneseq\_21:\* 1: geneseqp198

## RRESULT 1 AAW79681 IID AAW79 AC AAW79 A Gastrointestinal tract; GI tract; cancer; disease; detection; CS198; human; predisposition; treatment; Barret's oesophagus; gastric ulcer; gastritis; leiomyoma; polyps; Crohn's disease; ulcerative colitis; AAW79681 standard; protein; 215 AA Human CS198 protein C-terminal 11-JAN-1999 AAW79681; 08-OCT-1998 WO9844159-A1 Homo sapiens. pancreatitis. (first entry)

30-MAR-1998; 98WO-US006251

31-MAR-1997;

97US-00828855

(ABBO ) ABBOTT LAB

Billing-Medel PA, Cone... Granados EN, Hayden M, Granados EN, Russell ďĊ, 3 M, Colpitts TL, Hodges SC, Klass JC, Stroupe SD; Friedman PN, Gordon MR, Kratochvil JD;

WPI; 1998-542714/46.

New gastrointestinal polynucleotides, CS198, and their detection - us for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastritis. used

Claim 26; Page 103; 127pp; English.

This sequence represents the C-terminal of the human CS198 protein which is used in a method to detect the presence of a target CS198 protein which polynucleotide in a test sample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be used in detecting, diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oesophagus, gastric ulcer, gastritis, leiomyoma, polyps, cancer, Barret's Crohn's disease, oesophagus, ulcerative

ADA26380 ADN17173

AAE07320 AAW79677

AAW79679 AAE07322 ADA26382 ADN17175

Aae07322 Ada26382 Adn17175 Aaw79680

Adn171 Aae07320 Aaw79677

Human pro
Human gen
Human gen
Human Gen
Human CS
Synthetic
CS198 pep
Synthetic
Human CS
Synthetic
CS198 pep
Synthetic
CS198 pep
Synthetic
CS198 pep

AAM79574 AAG73987 ABO60042 ADX97562 ADG14341

Aam79574

Adg14341 Adn17172

CS198 pro Pancreati Human NC2

ADN17172

## Result No. Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution. 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 Query Match 8 geneseqp1980s:\* geneseqp1990s:\* geneseqp2000s:\* geneseqp2001s:\* geneseqp2002s:\* geneseqn2003as:\* geneseqp2003bs:\* geneseqp2004s:\* geneseqp2005s:\* Length 215 215 215 215 215 215 215 679 679 679 BB AAW79681 AAE07324 ADA26384 ADN17177 AAW79676 AAE07319 AAM78590 ADA26379 ä SUMMARIES Aaw79681 Description Ada26379 Aae07319 Aam78590 Human CS1 Human CS Synthetic CS198 pro Human pro Human Human CS1 CS1

SXS

colitis, and

pancreatitis

215

```
á
  В
  გ
   밁
  ð
   밁
  S
  Matches
             Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, contacting test sample with at least one CS 198-specific polynucleontacting test sample with at least one CS 198-specific polynucleontacting test sample with at least one CS 198-specific polynucleontacting the presence of target CS 198 polynucleontacting the presence of target CS 198 polynucleotide, useful for detecting the presence of target CS 198 polynucleotide, useful for detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosis.
  WPI;
  T 2
   Billingel PA
Granados EN,
  (KCLAS/)
(KCRAT/)
(ROBE/)
   31-MAR-1997;
   30-MAR-1998;
  02-AUG-2001
  US2001010904-A1
   CS 198; gastrointestinal tract disease; GI tract; cancer; gastric ulcer; gastritis; Crohn's disease; ulcerative colitis; pancreatitis; Barret's oesophagus; gene therapy; drug screening; human.
   Human CS 198
  06-NOV-2001
  AAE07324 standard; protein;
  (GORD/)
(GRAN/)
(HAYD/)
(HODG/)
  (BILL/)
(COHE/)
(COLP/)
(FRIE/)
   Local
  2001-496163/54
  215;
  181
   181
   121
  121
   19
   61
   щ
  μ.
  GRADON J.
GRANADOS E N.
HAYDEN M.
HODGES S C.
KLASS M R.
KRATOCHVIL J I
ROBERTS-RAPP 1
  Similarity
   COLPITTS T L.
FRIEDMAN P N.
   RUSSELL J C.
STROUPE S D.
  COHEN
  BILLINGEL P A.
  VWGWEVAGAPALRLQKSQSSDLLERERSVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  PA,
  100.0%;
ilarity 100.0%;
Conservative (
   protein C-terminal portion
  , Cohen M,
Hayden M,
L, Russell
  (first
   97US-00828855
   98US-00050516.
   entry)
   ۲.
  Colpitts TL, Friedman Hodges SC, Klass MR, JC, Stroupe SD;
   215
  ..
  Score 1132; DB 2;
Pred. No. 2.8e-108;
  Mismatches
   8
   Friedman
  215
  0
  PN, Gordon
Kratochvil :
   Length
  Indels
             tract, comprises polynucleotide.
  0
   120
  180
  60
  60
  0
```

```
δ
  밁
  Ś
  밁
  S
   片
   5
   The invention relates to a method of detecting the presence of a target CC CS 198 polynucleotide comprising contacting the test sample with at least CC cone CS 198 specific polynucleotide. The method is useful for detecting CC diseases of the gastrointestinal (GI) tract organs, particularly cancer. CC The CS 198 polynucleotides, polypeptides and antibodies are useful for detecting, diagnosing, staging, monitoring, prognosticating, preventing, cc treating or determining predisposition to diseases and conditions of the CC ulcerative colitis, pancreatitis and Barret's oseophagus. The CS 198 cc ulcerative colitis, pancreatitis and Barret's oseophagus. The CS 198 cc polypeptides are useful as standards or reagents in diagnostic cc immunoassays, as components or as target sites for various therapies. CC polypeptides are useful as delivery agents for therapeutic agents, in cc diagnostic tests and for screening for conditions or diseases associated with CS 198, particularly cancer. Monoclonal antibodies may also be used for the generation of chimeric antibodies for therapeutic use. The CS 198 cc method of the invention provides an alternative, non-surgical diagnostic method of the invention provides an alternative, non-surgical diagnostic method capable of detecting early stage GI tract disease such as cancer. The present sequence is C-terminal portion of human CS 198 polypeptide
  Matches
   Query Match
Best Local
  Sequence 215 AA;
   Claim 17; Page 52-53; 68pp;
  ADA26384 standard;
   181
  121
   121
  215;
   61
   61
   Similarity
   NSRSSSQASGITGSYSVSESSPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
  MSPRHLSESSGKPLSTKQEASKPPRGCPQAVRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVABERRNALFPEVFSPTPDENSDQ 120
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
   100.0%; ilarity 100.0%; Conservative 0
protein;
  215
   English.
  0;
  Score 1132; DB 4;
Pred. No. 2.8e-108;
  ጅ
  Mismatches
  Length
  Indels
   215;
  ٥,
  Gaps
  60
   180
   120
```

```
ADA26384 standard; protein; 215 AA.

XX

XX

ADA26384;

XC

ADA26384;

XX

DT

20-NOV-2003 (first entry)

XX

DE

Synthetic peptide based on CS198 protein #5.

XX

CS198; cancer diagnosis; cancer staging; cancer monitoring;

XX

CS198; cancer diagnosis; cancer prevention; cancer;

XX

CS198; cancer diagnosis; cancer prevention; cancer;

XX

XX

CS198; cancer diagnosis; cancer staging; cancer monitoring;

XX

XX

YM

CS198; cancer diagnosis; cancer staging; cancer monitoring;

XX

XX

YM

CS198; cancer diagnosis; cancer staging; cancer;

XX

YM

CS198; cancer diagnosis; cancer staging; cancer;

XX

YM

CS198; cancer diagnosis; cancer prevention; cancer;

XX

YM

CALCHOMACONICAL STANCER

XX

PD

O1-MAY-2003.

XX

YM

D1-MAY-2003.

XX

PP

23-OCT-2002; 2002US-00278547.

XX

PR

31-MAR-1997; 97US-00828855.

PR

30-MAR-1998; 98US-00050516.

XX

PA

(COHE/) BILLINGEL P A.
```

```
RESULT 4
ADN17177
ID ADN1
XX
AC ADN1
XX
AC ADN1
XX
AC 17-J
XX
DE CS19
XX
   5
   밁
   S
  밁
  ঠ
  밁
   ð
  밁
   Query Match
Best Local Similarity
Matches 215; Conserv
  The invention describes a method of detecting the presence of a target CS198 polynucleotide in a test sample. The method comprises contacting the test sample with at least one CS198 specific polynucleotide or its complement, and detecting the presence of the target CS198 polynucleotide in the test sample, where the CS198-specific polynucleotide has at least 50% identity to a polynucleotide having any of the 27 fully defined sequences of 34-2894 bp (S1-27) given in the specification, or their fragments or complements. The composition and methods are useful in diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition of an individual to, diseases and conditions of the gastrointestinal tract, e.g. cancer and in gene therapy. This is the amino acid sequence of a synthetic peptide based on the predicted human CS198 protein sequence derived from the CS198 consensus sequence shown in seq id 27.
  Detecting the presence of a target CS198 polynucleotide in a test sample comprises contacting the sample with a CS198 specific polynucleotide and detecting the presence of the target CS198 polynucleotide in the test
  Sequence
   Claim 52;
   WPI; 2003-596961/56
   Granados EN,
Roberts-Rapp
   Billingel
  (HODG/)
(KLAS/)
(KRAT/)
              CS198 protein
   17-JUN-2004
  (GORD/)
  (COLP/)
  ADN17177 standard; protein; 215
  ROBE/)
  181
   121
  121
  181
   61
  62
   COLPITTS T L.
PRIEDMAN P N.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
KLASS M R.
KRATOCHVIL J I
ROBERTS-RAPP I
  μ
   ш
   RUSSELL J C.
STROUPE S D.
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   VMGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  215 AA;
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
  MSPRHISESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
  PA,
   Page 52;
  Conservative
   , Cohen M,
Hayden MA,
L, Russell
   ۲
   (first
   67pp;
   100.0%;
  entry)
   ۳.
   Colpitts TL,
Hodges SC,
L JC, Stroupe
   English
  0,
   Score 1132; DB 6;
Pred. No. 2.8e-108;
; Mismatches 0;
   ⋛
  Priedman
Klass MR,
SD;
  215
   PN, Gordon
Kratochvil
  Length
  Indels
  215;
  å,
  0;
  Gaps
   180
  120
  180
  120
   60
  60
  0
```

```
밁
밁
                     ঠ
   片
  ঠ
  δ
  밁
   δ
   Matches
   Query Match
Best Local (
   The invention relates to reagents and methods for detecting diseases of the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polynucloctide in the test sample. The methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of diseases or conditions associated with aberrant expression or activity of the CS198 polypeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 protein used to illustrate the method of the
   Gastrointestinal tract;
  Diagnosing diseases such as ca
   Claim
  associated treatment methods.
   WPI; 2004-313754/29
  Billingel PA,
  (GORD/
   (BILL/)
   31-MAR-1997;
   22-AUG-2003; 2003US-00646873.
   Sequence 215
  present sequence invention.
   Roberts-Rapp
  Granados EN,
  (KILAS/
  (FRIB/
   30-MAR-1998;
   (STRO/)
   (KRAT/
   (HAYD,
   COLP/
   HODG
  121
  121
 181
                      181
   17;
  215;
  61
  61
   KRATOCHVIL J
ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
  GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
KLASS M R.
  \vdash
  μ
   COHEN M.
  Similarity
  COLPITTS T L. FRIEDMAN P N.
              DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   SBQ
   Conservative
   , Cohen M,
Hayden MA,
L, Russell
   Ŋ,
   ŗ,
  ID NO 47; 67pp;
   97US-00828855.
98US-00050516.
   100.0%; Score 1132; DB 8; 100.0%; Pred. No. 2.8e-108; tive 0; Mismatches 0;
  GI tract; CS198; cancer; gene therapy.
  ďĊ,
   Colpitts TL,
Hodges SC,
   cancer of the on or activity
   English
   Stroupe
   Klass MR,
SD;
  Friedman
  gastrointestinal tract, of the CS198 polypeptid
                       215
  215
   8
   PN, Gordon
Kratochvil
   Length
  Indels
   polypeptide,
  215;
  ٥,
   មូរ
  Gaps
  γď
   and
```

6

0

60

180

120 120

RESULT, 5

```
RESULT 6
   ş
  Ş
  á
   밁
   밁
   밁
   밁
   δ
  Query Match
Best Local Similarity
   Matches 215;
  This sequence represents the human CS198 protein which is used in a method to detect the presence of a target CS198 polynucleotide in a test sample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be used in detecting, diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oesophagus, gastric ulcer, gastritis, leiomyoma, polyps, Crohn's disease, ulcerative colitis, and
   Gastrointestinal tract; GI tract; cancer; disease; detection; CS198; human; predisposition; treatment; Barret's oesophagus; gastric ulcer gastritis; leiomyoma; polyps; Crohn's disease; ulcerative colitis;
  Sequence 679 AA;
  Claim
   New gastrointestinal polymucleotides, CS198, and their detection - us for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastritis.
   WPI; 1998-542714/46
   Roberts-Rapp L,
   Granados EN,
   Billing-Medel PA,
   31-MAR-1997;
   30-MAR-1998;
   W09844159-A1
   Homo sapiens
  pancreatitis.
  Human CS198 protein
   11-JAN-1999
   AAW79676 standard; protein;
   (ABBO ) ABBOTT LAB.
   645
  585
   525
  465
   181
  121
  26; Page 100-102; 127pp; English.
  61
   μ.
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   Conservative
   (first
   Hayden M, Hod
L, Russell JC,
   97US-00828855
  98WO-US006251.
  Cohen M, Colpitts TL,
en M, Hodges SC, Klass
   entry)
  100.0%;
  679
   0;
  Score 1132; DB 2;
Pred. No. 1.4e-107;
); Mismatches 0;
   Stroupe SD;
  Š
   ₹,
   Friedman PN,
   215
   679
   Kratochvil JD;
   Indels
  Length
  Gordon J;
   <u>.</u>.
  treating,
the GI
  used
  180
  120
   524
   584
   60
   644
   0
```

```
(HAYD/)
(HODG/)
(KLAS/)
  Homo sapiens
   CS 198; gastrointestinal tract disease; GI traet; cancer; gastric ulcer; gastritis; Crohn's disease; ulcerative colitis; pancreatitis;
  06-NOV-2001
   Billingel PA,
Granados EN,
  (GORD/)
  (COLP/)
  31-MAR-1997;
   30-MAR-1998;
  02-AUG-2001.
  US2001010904-A1.
   Misc-difference
   Barret's oesophagus; gene therapy; drug screening; human.
  Human CS 198
  AAE07319 standard; protein; 679
   Roberts-Rapp
  (ROBE/
  (KRAT/)
   (COHE/)
  (BILL/)
  2001-496163/54.
DB; AAD13637.
  HAYDEN M.
HODGES S C.
KLASS M R.
KRATOCHVIL J
ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
  GORDON J.
GRANADOS E N.
   BILLINGEL P A.
   COLPITTS T L. FRIEDMAN P N.
   COHEN
   ŗ
   protein
   Cohen M,
Hayden M,
  (first entry)
  97US-00828855.
  98US-00050516
   Location/Qualifiers
   /note= "Encoded by CGGN"
  Russell
  ם יו
  JC,
   Colpitts TL, Friedman
Hodges SC, Klass MR,
   Stroupe SD;
   PN,
   Kratochvil
   Gordon J;
```

Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, concacting test sample with at least one CS 198-specific polynucle tract, comprises polynucleotide.

Claim 17; Page 49-51; 68pp; English.

The invention relates to a method of detecting the presence of a target CC CS 198 polynucleotide comprising contacting the test sample with at least CC cone CS 198-specific polynucleotide. The method is useful for detecting CC diseases of the gastrointestinal (GI) tract organs, particularly cancer. CC The CS 198 polynucleotides, polypeptides and antibodies are useful for detecting, diagnosing, staging, monitoring, prognosticating, preventing, ctreating or determining predisposition to disease and conditions of the CC ulcerative colitis, pancreatitis and Barret's oesophagus. The CS 198 culcerative colitis, pancreatitis and Barret's oesophagus. The CS 198 collypeptides are useful as delivery agents in diagnostic contained within these CC immunoassays, as components or as target sites for various therapies. CC introduces directed against at least one epitope contained within these CC polypeptides are useful as delivery agents for therapeutic agents, in CC diagnostic tests and for screening for conditions or diseases associated court the generation of chimeric antibodies for therapeutic use. The CS 198 cpolynucleotide is also useful in cancer herapy and arms are contained within these conditions or diseases associated court the generation of chimeric antibodies for therapeutic use. The CS 198 cpolynucleotide is also useful in cancer herapy and arms consisted the conditions or diseases associated court the generation of chimeric antibodies for the grant cancer. The CS 198 cpolynucleotide is also useful in cancer herapy and arms of the conditions or conditions or conditions or diseases. polynucleotide is also useful in gene therapy and drug screening. method of the invention provides an alternative, non-surgical diag method capable of detecting early stage GI tract disease such as the present sequence is human CS 198 polypeptide diagnostic

```
RESULT 7
 S
  밁
   ð
   ĝ
  S
  밁
   S
   S X
  Query Match
Best Local Similarity
Matches 215; Conserv
   03-FEB-2000;
27-APR-2000;
20-JUN-2000;
19-JUL-2000;
01-SEP-2000;
  Human; cytokine; cell proliferation; cell differentiation; gene th vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; immunomodulatory; cancer; leukaemia;
   Human protein SEQ ID NO 1252.
  06-NOV-2001
   AAM78590 standard;
   Sequence
The invention relates to polynucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce
  09-AUG-2001
   WO200157190-A2
  Nucleic acids encoding polypeptides with cytokine-like activities, useful in diagnosis and gene therapy.
   WPI; 2001-476283/51.
N-PSDB; AAK51723.
   05-FEB-2001; 2001WO-US004098
   Homo
   Claim
   (HYSE-) HYSEQ INC.
   y, Liu C, Y, Zhao QA, W
  -SEP-2000;
  sapiens
   645
  585
  525
   465
  181
   121
   61
   \vdash
   system
   679
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPFGQRKKEQWYAGINFS
   VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALPPEVFSPTPDENSDQ
  VWGWEVAGAPALRLOKSOSSDLLERERESVLRREQEVABERRNALFPEVFSPTPDENSDQ
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEBDD
  Page 3512-3514; 6221pp;
   Conservative
  2000US-00560875.
2000US-00598075.
2000US-00620325.
2000US-00654936.
2000US-00653351.
2000US-0069335.
2000US-00728422.
  (first
   3
  2000US-00496914.
   disorder; arthritis; inflammation.
   Wang D, W
Wejhrman
   protein; 679
   entry)
  100.0%;
  RT,
Wang
  H
   <u>.</u>
  Score 1132; DB 4;
Pred. No. 1.4e-107;
   Asundi V,
y J, Zhang 
Goodrich R
   Mismatches
  ₹
  English.
  , Zhou P,
ng J, Ren 1
n R;
  679
   215
   0
   ্ম
  Indels
  Length
  ž
   u C,
Chen
  679;
   R, Cao
   0
   Y;
Wang
  therapy;
  Gaps
  ZW;
   180
  120
  584
  524
   60
  644
   0
```

```
RESULT 8
ADA26379
  δ
   밁
  δ
  밁
  S
  밁
  S
  អនុស្ស ខ្លួន ខ
Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 215; Conservative 0
   production of other cytokines in other cell populations. The polymucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopolesis regulating activity, tissue growth factor activity, immunomodulatory activity and activin/inhibin activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and inflammation. Note: Records for SEQ ID NO 2110 (AAX52581), 2111 (AAX52582) and 3666 (AAM80020) are omitted as the relevant pages from the sequence listing were missing at the time of publication
  Sequence
   gastrointestinal tract
   CS198; cancer diagnosis; cancer staging; cancer monitoring; cancer prognosticating; cancer prevention; cancer;
   (BILL/)
(COHE/)
(COLP/)
(FRIE/)
(GORD/)
  Synthetic;
   Predicted
   20-NOV-2003
  31-MAR-1997;
  23-OCT-2002; 2002US-00278547
   01-MAY-2003
  US2003082619-A1
  ADA26379;
  ADA26379 standard;
            (ROBE/)
(RUSS/)
(STRO/)
   30-MAR-1998;
   (KCLAS/
  (HAYD)
  (HODG/
   GRAN/
  KRAT/
  645
   181
   585
  525
   121
  465
  13
   1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
         BILLINGEL P A.
COLPITTS T L.
COLPITTS T L.
PRIEDMAN P N.
GORDON J.
GORDON J.
GORDON J.
HAYDEN M A.
HODGES S C.
KLASS M R.
KRATOCHVIL J D
ROBERTS-RAPP L
RUSSELL J C.
STROUPE S D.
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
  679 AA;
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  DGINSEVLEAIRVTRHKNAMABRWESRIYASEEDD
   amino acid sequence
   (first
   97US-00828855
98US-00050516
  protein;
   entry)
  679
  0
  Score 1132; DB 4;
Pred. No. 1.4e-107;
); Mismatches 0;
  of the CS198 protein
  679
   215
  Length
  Indels
  0
  Gaps
  the
   180
  584
   120
   524
   9
  644
```

```
ADDN17171
ADDN17171
ADDN17171
ACC AIT

   밁
   ઇ
  밁
   S
  밁
  δ
  문
  Ş
  Query Match
Best Local Sim:
Matches 215;
   Billingel PA,
Granados EN,
Roberts-Rapp L
   therapy. ....
  The invention describes a method of detecting the presence of a target CS198 polynuclectide in a test sample. The method comprises contacting the test sample with at least one CS198 specific polynuclectide or its complement, and detecting the presence of the target CS198 polynuclectide in the test sample, where the CS198-specific polynuclectide has at least 50% identity to a polynuclectide having any of the 27 fully defined sequences of 34-2894 bp (S1-27) given in the specification, or their fragments or complements. The composition and methods are useful in
   comprises
detecting
  diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition of an individual to, diseases and conditions of the gastrointestinal tract, e.g. cancer and in gene therapy. This is the predicted amino acid sequence of the human CS198 protein derived from the CS198 consensus sequence shown in seq id 27.
                               31-MAR-1997;
30-MAR-1998;
  22-AUG-2003;
   04-MAR-2004
   US2004043406-A1
   Gastrointestinal
   CS198 protein
  17-JUN-2004
   ADN17172 standard;
   Sequence 679
  Claim 17;
   WPI;
  Local Similarity
   585
  645
   181
  121
  525
  465
   61
   μ.
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRPRAPDEPQQAQVPH
  DGINSEVLEAIRVTRHKNAMABRWESRIYASEEDD
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   the presence of a target CS198 polynucleotide in a test sample contacting the sample with a CS198 specific polynucleotide and the presence of the target CS198 polynucleotide in the test
  Page 49-50;
   Conservative
  Ä
  ŗ
  2003US-00646873
   Cohen M,
Hayden MA,
  (first
  #
                            97US-00828855
98US-00050516
   tract;
   protein;
  100.0%;
  67pp;
   ពួ
  Colpitts TL,
Hodges SC,
JC, Stroupe
   tract; CS198; cancer; gene therapy.
   679
   0,
  English.
  Score 1132; DB 6;
Pred. No. 1.4e-107;
Mismatches 0;
   ₿
  Friedman
Klass MR,
s SD;
  679
  PN, Gordon
Kratochvil
  Length
   Indels
  679;
  g;
   <u>.</u>
   180
  644
   584
  120
  524
   60
```

ADX97562
ID ADX977562
ID ADX977
AX ADX97
AX ADX97
XX 21-AF
DT 21-AF
XX PANCE
XX PANC

(first entry)

ADX97562 standard;

protein;

692

21-APR-2005 Pancreatic

associated

human

protein,

SEQ

Ħ

110.

Homo sapiens

pancreas tumor; cytostatic

```
Ś
  片
   Ş
  맑
  Ş
   片
   Ś
   Matches
   Query Match
   The invention relates to reagents and methods for detecting diseases of the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polymucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of diseases or conditions associated with aberrant expression or activity of the CS198 polypeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 protein used to illustrate the method of the
  Diagnosing diseases such as cancer of the detecting aberrant expression or activity associated treatment methods.
  (BILL/)
(COHE/)
(COLP/)
(FRIE/)
(GORD/)
(GORD/)
(GRAN/)
(HAYD/)
   Sequence 679
  Billingel PA,
Granados EN,
  Claim 17;
  GENBANK; D87440.
   WPI; 2004-313754/29.
  Roberts-Rapp
  (KLAS/)
  (ROBE/)
   Local
645
  585
   121
  465
                      181
   215;
   61
  1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
   COLPITTS T L.
FRIEDMAN P N.
GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
   HAYDEN M A.
HODGES S C.
KLASS M R.
KRATOCHVIL J
   COLPITTS
   Similarity
   BILLINGEL
  NSRSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
   VWGWEVAGAPALRIQKSQSSDLIERERESVLRREQEVAEERRNALFPEVFSPTFDENSDQ 120
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
                      DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTV
  VWGWEVAGAPALRLOKSOSSDLLERERESVLRREQEVABERRNALFPEVFSPTFDENSDO
  SEQ ID
   Conservative
  ŗ
   8
  , Cohen
Hayden
  NO 42; 67pp; English
   Russell
  Þ
  100.0%;
  3.3
  ۲.
  Colpitts TL,
Hodges SC,
JC, Stroupe
   ç
  Score 1132; DB 8;
Pred. No. 1.4e-107;
  Mismatches
   Klass
SD;
   Friedman
  gastrointestinal tract, by of the CS198 polypeptide,
   ¥,
  0
  PN,
   N, Gordon J;
Kratochvil JD
   Length
  Indels
  679;
   0;
  Gaps
  ş
  and
  524
  584
  644
```

```
문
                                       र्
  片
  δ
  밁
  र्
   S
문
   treatment of pancreatic cancer, using a substance that inhibits or binds to the protein or its DNA, including: an antisense oligonucleotide, short interfering RNA or ribozyme directed against the pancreatic protein, an organic molecule, particularly having a molecular weight below 5000, ce specially 300, that binds to the pancreatic DNA, an aptamer or (monoclonal) antibody, preferably human or humanized, that binds to the pancreatic DNA, or an anti-idiotypic antibody raised against the garcup, cytotoxic compound, immunostimulant and/or radioisotope. The novel thuman pancreatic proteins and their encoding DNA have cytostatic cancer. This sequences are useful for inhibiting transcription and/or expression of genes and proteins associated with pancreatic cancer. This sequence represents one of the novel human pancreatic proteins of the invention. Note: This sequence is not shown in the specification, it has been electronically downloaded from a DVD-rom to the control of the control of the control of the pancrean part of the control of the cont
  Query Match
Best Local S
Matches 215
   New nucleic acid differentially expressed use as diagnostic agents and in screening
   WPI; 2004-768082/76
N-PSDB; ADX97491.
  31-MAR-2003; 2003DE-01015834.
   31-MAR-2004; 2004EP-00090124.
   27-OCT-2004
   EP1471075-A2
   pancreas and its encoded protein. The invention further comprises: proteins and peptides, preferably isolated, that contain a sequence encoded by the novel nucleic acid; and methods for diagnosis and
  Claim 2;
   Sequence 692 AA;
   The invention relates to a novel human nucleic acid sequence of
   Rosenthal A,
   provided with this
   Lichtner R,
   (ATTA)
  (/ZNIH)
   SPEC/)
  ROSE/)
   538
  181
  598
  121
  478
658
   61
  215;
   1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   DAHL E.
SPECHT T.
  LICHTNER R.
  HINZMANN B.
   Similarity
   PILARSKY C.
   SEQ ID NO 110; 28pp;
  NSRSSSQASGITGSYSVSESPFPSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   VMGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
                         DGINSEVLEAIRVTRHKVAMAERWESRIYASEEDD 215
   VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTV
  Conservative
   Staub
  Pilarsky C, Dahl E,
Staub E, Roepcke S,
   specification by the European
   100.0%;
  <u>,</u>
   Score 1132; DB 8;
Pred. No. 1.5e-107;
  German.
  Mismatches
   Specht T,
Li X;
  in pancreatic tumor tissue, for therapeutic agents.
    692
  Bruemmendorf T;
  Patent
  Length 692;
  Indels
  0;
  Gaps
   180
  120
  537
  60
   657
   597
```

RESULT 11 ADG14341

RESULT 12 AAM79574 ID AAM79 XX

AAM79574 standard; protein;

672

B

584

```
XSXK
  数数数器
   밁
  S
  밁
                       8
   밁
   ঠ
  S
   Query Match
Best Local S
Matches 214
   The present invention relates to human NC1, NC2 and NC3 proteins and coding sequences (ADG14340-ADG14345). The coding sequences are useful for detecting and screening proliferative insulin-producing cells as well as differentiation and proliferation of such cells and their precursors as analogous cells in treatment of e.g. PHHI and diseases due to differentiation/proliferation abnormality, diseases of the nervous system and pancreas. The coding sequences are also useful as spontaneous proliferation models of pancreas beta-cells. The novel genes NC1, NC2 and NC3 were isolated from the pancreas of PHHI patients, which were used in testing for the detection of proliferative insulin-producing cells or
   Niwa
   Familial persistent hyperinsulinemic hypoglycemia of infancy (PHHI) patient-expressed genes for detecting and screening e.g. proliferative insulin-producing cells in treatment of PHHI.
   06-MAR-2003; 2003WO-JP002620
   WO2003078631-A1
  Homo sapiens
  Human; NC1; NC2; neuroprotective.
   26-FEB-2004
  ADG14341 standard; protein; 679
  Sequence 679
   Claim 1; SEQ ID NO 2; 34pp; Japanese
   N-PSDB;
  15-MAR-2002; 2002JP-00071592.
  25-SEP-2003
   pancreas beta-cells
  (KANP )
   ŗ
   2003-767524/72.
                          181
   121 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  525
  465
   214;
  61 VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
  1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  KANEKA CORP.
  Similarity
   ADG14344.
   Yamashita
              DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
  VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVABERRNALFPEVFSPTPDENSDQ
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRPRAPDEPQQAQVPH
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTV
   Conservative
  A
A
   (first entry)
   NC3; PHHI; pancreas beta-cell; insulin; antidiabetic;
   by Northern
  99.7%;
99.5%;
   1;
   Pred. No. 2.9e
1; Mismatches
  Score 1129; Db ,,
No. 2.9e-107;
  analysis.
679
  /EDPVDSAPPĠQRKKDQWYAGINPS
   ·
•
  Length 679;
  Indels
  ٥,
  Gaps
   180
  120
   524
   60
```

```
y
B
  Query Match
Best Local S
  Matches
   03-FEB-2000;
27-APR-2000;
20-JUN-2000;
   The invention relates to polynucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopolesis regulating activity, tissue growth factor activity, haematopolesis regulating activity, inhibin activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, narvous system discorders, arthritis and inflammation. Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666 (AAM80020) are omitted as the relevant pages from the sequence listing were missing at the time of publication
  Tang
  Human; cytokine; cell proliferation; cell differentiation; gene therapy; vaccine; peptide therapy; stem cell growth factor; haematopolesis; tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorder; arthritis; inflammation.
   Sequence 672 AA;
   Claim
  Nucleic acids encoding polypeptides with cytokine-like activities, useful in diagnosis and gene therapy.
  WPI; 2001-476283/51.
N-PSDB; AAK52707.
   Xue
   Ma
   01-SEP-2000;
15-SEP-2000;
  05-FEB-2001; 2001WO-US004098.
  09-AUG-2001.
   WO200157190-A2
  Homo sapiens.
   Human protein
   06-NOV-2001
   AAM79574;
  19-JUL-2000;
  (HYSE-)
  y YT, Liu C,
Y, Zhao QA,
AJ, Yang Y,
  ₽,
   518
  121
   458
   61
  1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  Similarity
  HYSEQ INC.
                    NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   VWGWEVAGAPALRLQKSQSSDLLERERESYLRREQEVAEERRNALFPEVFSPTPDENSDQ
   VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   Page 288; 6221pp; English.
  2000US-00496914
2000US-00560875
2000US-00598075
2000US-00620325
2000US-00634936
2000US-00634936
2000US-00693325
2000US-00693325
2000US-00728422
  Conservative
   (first entry)
  SEQ ID NO 3220.
  Wang D, Wan
Wejhrman T,
   Drmanac RT, !
Wang D, Wang
  99.5%;
   ۲,
  Score 1127; DB 4;
Pred. No. 4.6e-107;
  Asundi V, Zhou P, 1
J, Zhang J, Ren F,
Goodrich R;
   Mismatches
   Length 672;
  Indels
  Χu C,
   Chen
   Cao Y;
R, Wai
   0;
   Wang ZW;
   Gaps
  180
   120
   517
                      637
   577
  60
  0
```

ð 밁 Ş 문 S

S 밁 S

84

ERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVSESPFF

APALRLQKSQSSDLL

40

PTRPPQANRGVVRWEYFRLRPLRFR

Matches

167;

Conservative

0,

Indels

20;

Gaps

24 ш

Local Similarity

```
RESULT 13
AAG773987
ID AAG773
AC AAG73

  닭
  S
  AAH32943 to AAH37195 and AAG73514 to AAG77788 represent human colon cancer associated nucleic acid molecules (N) and proteins (P), where the proteins are collectively known as colon cancer antigens. The colon cancer antigens have cytostatic activity and can be used in gene therapy cancer antigens have cytostatic activity and can be used in gene therapy and vaccine production. N and P may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate P expression. For example, N and P may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of P by expressing inactive proteins or to supplement the patients own production of P. Additionally, N may be used in the rectifying the colon cancer associated P, by inserting the nucleic acids to produce the colon cancer-associated P, by inserting the nucleic acids to produce the colon cancer-associated P, by inserting the proteins. N and P can be used in the prevention, diagnosis and treatment of colorectal carcinomas and cancers. AAH37196 to AAH77204 and AAB77789 represent sequences used in the exemplification of the present invention. N.B. Pages 666 to 682 and page 7053 of the sequence listing were missing at time of publication, meaning no sequences are present for SEQ ID NO:1027 to 1027 7201 and 7202.
  Query Match
Best Local
   Nucleic acids encoding 4277 human colon cancer-associated polypeptides, useful for preventing, diagnosing and/or treating colorectal cancers.
   Sequence 172 AA;
   to 1052,
  Claim 11; Page 6550-6551; 9803pp; English.
  WPI; 2001-235357/24.
  29-SEP-1999;
03-NOV-1999;
  28-SEP-2000; 2000WO-US026524
   05-APR-2001
  WO200122920-A2
   Homo sapiens.
   colorectal carcinoma
   Human; colon cancer; colon cancer antigen; diagnosis; detection;
  Human colon cancer antigen protein SEQ ID
  03-SEP-2001
  AAG73987 standard;
   (HUMA-) HUMAN GENOME SCI INC
   of publication, me 052, 7921 and 7922
   181
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
  (first entry
  99US-0157137P.
99US-0163280P.
  protein; 172
                                     74.1%;
87.0%;
  Birse
   Score 839; DE
Pred. No. 3.9e
0; Mismatches
  É
  Rosen CA;
DB 4; I
3.9e-78;
hes 5;
   NO:4751
  672
  Length 172;
```

```
ABOGO 042
IID ABOGO
XX Humar
XX Humar
XX Humar
XX Homo
XX IF O3 -AI
XX O3 -AI
XX New I
PA (PENI
PA (PENI
PA (PANI)

  ફ
  밁
  ৪
  밁
   맑
                      The invention relates to a nucleic acid probe for measuring human gene CC expression, comprising any of the 27,400 fully defined nucleotide CC encoding at least 8 amino acids of any of the 6888 amino acid sequences fully defined in the specification. The probe is a single exon probe that CC hybridises under high stringency conditions to a nucleic acid molecule CC expressed in human cells or tissues. Also included are a spatially-CC addressable set of single exon nucleic acid probes for measuring human (comprising a plurality of single exon nucleic acid probes cited above, where each of the plurality of probes is separately CC and addressably isolatable or amplifiable from the plurality), a single exon microarray for measuring human gene expression, a wetcor comprising the single exon probe cited above, an ORF-encoded peptide comprising at least 8 CC contiguous amino acids of any of the above-mentioned amino acid contiguous amino acids of any of the above-mentioned amino acid sequences (optionally with conservative amino acid substitutions), an CC sequences (optionally with conservative amino acid substitutions) and called antibody that binds specifically to a peptide cited above, methods of selling and/or licensing single exon probes or microarrays to a customer desiring to measure gene expression, a method of providing to measure gene expression, a method of providing contains a database having a plurality of records (each record including data on the expression of a single exon probe cotted above. The probes and apparatus are useful in gene cotted above, methods and apparatus are useful in gene cotted above. The probes and apparatus are useful in gene cotted actions and apparatus are useful in gene cotted actions.
  US2003194704-A1
  Homo sapiene
  Human; gene expression; single exon probe; microarray; alternative splicing event; genomic alteration.
   Human genome derived single exon protein #6276
   ABO60042;
  New human genome-derived single exon nucleic acid probes useful for human gene expression analysis, for identifying or characterizing alternative splicing events, for assessing genomic alterations or as tools for
  16-OCT-2003
   29-JUL-2004
   ABO60042 standard; protein;
   Claim 45; SEQ ID NO 33676; 80pp; English.
  WPI; 2004-119264/12
  03-APR-2002; 2002US-00029386
  03-APR-2002; 2002US-00029386
  Penn SG
   (PENN/)
  (/ZNAH)
   161
  204
  101
  144
  41
  PENN S G.
RANK D R.
HANZEL D K.
  WESRIYASEEDD
  SPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRHKNAMAER 203
  ERERESVLRREQEVXEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVSESPFF
  WESRIYASEEDD
  SPIHLHSNVAWTVEDXVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRHKNAMAER
  Rank DR,
   (first entry)
   Hanzel
  215
   무
   43
   ₹
   100
```

probes

used as tools

Sequence 36 AA;

used in a method to detect the presence of a target human CS198 polynucleotide in a test sample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be used in detecting, diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oescombarric ulcer, gastritis, leiomyoma, polyos (Tachro).

New gastrointestinal polynucleotides, CS198, and their detection - used for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastritis.

```
RESULT 15
AAW79677
ID AAW79677
ID AAW79677
ID AAW79677
ID AAW79677
ID AAW79677
ID AAW79677
ID AAW79677
ID AAW79677
ID AAW7967
ID AAW79
ID Synth
XX Gastr
KW Humann
KW Gastr
ID AAW7
ID 
  밁
  S
  Query Match
Best Local S
Matches 43
  specific exon, or in constructing genome-derived single exon microar. In addition, the probes are used in identifying and characterising alternative splicing events, in detecting and characterising gross alterations in the genomic locus that includes their exon, in assess. smaller genomic alterations, in priming the synthesis of nucleic action in expressing the ORF-encoded peptide. The present sequence is a single exon probe protein of the invention. Note: The sequence data this patent did not form part of the printed specification, but was obtained in electronic format directly from USPTO at sequence.html?DocID=20030194704
   tissues to detect the presence of expressed messages that contain their
   human; predisposition; treatment; Barret's oeso gastritis; leiomyoma; polyps; Crohn's disease;
  Synthetic CS198 derived peptide
   AAW79677 standard;
  Sequence
  Billing-Medel PA,
Granados EN, Hayd
  30-MAR-1998;
   08-OCT-1998.
   Synthetic
  Gastrointestinal tract; GI tract;
   11-JAN-1999
  AAW79677;
  WPI; 1998-542714/46.
  Roberts-Rapp L,
   WO9844159-A1
   pancreatitis.
   (ABBO)
   Local Similarity
  131 ITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQW 173
   43;
  43 AA;
  ITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQW
   Conservative
   (first entry)
   Hayden M,
L, Russell
  98WO-US006251
   97US-00828855
  Cohen M,
   protein;
   20.8%;
  M, Colpitts TL,
Hodges SC, Klass
JC, Stroupe SD;
   0;
  36
   Score 236; DB 8;
Pred. No. 1.2e-16;
0; Mismatches 0;
   B
   世.
  cancer; disease; detection; CS198;
   Barret's oesophagus;
  MR, Kratochvil
  0
   Length 43;
  single exon microarrays
  Indels
  43
  Gordon
   in assessing
  0
  Gaps
   acids,
   for
   0
```

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 s
  Total number of hits satisfying chosen parameters:
   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
   seq length: 0
seq length: 2000000000
   protein search, using sw
   BLOSUM62
Gapop 10.0 , Gapext 0.
   US-10-646-873-47
1132
1 MSPRHLSESSGKPL
   March
   283416 seqs, 96216763 residues
   PIR_80:*
  MSPRHLSESSGKPLSTKQEA.....HKNAMAERWESRIYASEEDD
Copyright
   pir1:*
pir2:*
pir3:*
pir4:*

    2006, 13:26:31; Search time 13.5811 Seconds
(without alignments)
    1523.185 Million cell updat

   Length DB
   862
699
329
490
7962
638
783
783
1390
1390
1390
1486
1486
  1145
1446
1534
564
1071
1488
398
1013
1051
  GenCore version 5.1.7 (c) 1993 - 2006 Biocceleration Ltd
   T00636
T14787
T23764
A59251
A45344
                         G90754
C64832
JH0228
I53106
E85343
AH0615
835264
T33470
  $62061
A70912
T30888
E85618
  S37241
T14004
T02195
  I38346
D85435
   summaries
   T46289
  SUMMARIES
  model
   hypothetical prote
SCD5 protein - yea
probable leus prot
vitellogenin - Ath
hypothetical prote
kinesin-like cell
              hypothetical prote cell division prot cell division prot hypothetical prote serine/threonine-s
   hypothetical prote
legumin B - fava b
trfA protein - sli
  cell division prot
cell division prot
gene gli protein -
  Description
  cell updates/sec
  BEL1-like homeobox
   STP4 protein - yea
elastic titin - hu
   hypothetical
  probable protein
  hypothetical
  nypothetical prote
  mmediate-early pr
  ıricase BH0759 (im
  hypothetical protein F21856_2 - human C;Species: Homo sapiens (man) C;Date: 01-Feb-1999 #sequence_revision 01-Feb-1999 #text_change 09-Jul-2004 C;Accession: T00636
C;Accession: T00636
C;Accession: J.E.; McCready. P.M.; Skowronski, E.; Adamson, A.W.; Burkhart-Schultz, K.; C R;Lamerdin, J.E.; McCready. P.M.; Skowronski, E.; Adamson, A.W.; Burkhart-Schultz, K.; C rgescu, A.; Avila, J.; Liu, S.; Bruce, R.; Quan, G.; Montgomery, M.; Ow, D.; Nolan, M.; submitted to the EMBL Data Library, January 1998 submitted to the EMBL Data Library, January 1998
A;Description: Sequence analysis of a 3.5 Mb contig in 19p13.3 between CDC34 and D198342
   RESULT 2
T14787
  A,Status: preliminary; translated A,Molecule type: DNA A,Residues: 1-679 <LAM>
  A; Reference number: Z14195
A; Accession: T00636
   밁
   δ
  밁
   5
  A;Cross-references: UNIPROT:Q8IVT2;
C;Genetics:
   T00636
  RESULT 1
   δ
  밁
    A; Reference number: A; Accession: T14787
                            submitted to the Protein
   525
   181
   121
               otein Sequence Database,
Z18178
```

from GB/EMBL/DDBC

Result No.

Score

118 101.5 101 96 94.5 93.5

93 92.5 92 90 89.5

86.5 86.5 86.5

Minimum DB Maximum DB

Database

Searched:

Scoring table: Sequence:

Title: Perfect score:

Š

protein -

92:

| 82.5<br>5                             | 82.5<br>5.5                                                                          | 83.5<br>83<br>83                                         | 83.5<br>5                                               | 84<br>84<br>83.5                                               |   |
|---------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------------|---|
| 7.3                                   | 777.3                                                                                | 7.4<br>7.3                                               | 7.4                                                     | 7.4.4                                                          |   |
| 450<br>1196                           | 1435<br>210<br>261                                                                   | 1230<br>275<br>686                                       | 581<br>611<br>881                                       | 884<br>1378<br>5327<br>489                                     | 3 |
| NN                                    | ง่าย่อ                                                                               | 2 1 2                                                    | N N N                                                   | N N N N                                                        |   |
| T21931<br>T23832                      | A37793<br>F69983<br>WMBEXE<br>A41950                                                 | T22458<br>TVRTFR<br>T20898                               | T22455<br>T22456<br>S25445                              | S66308<br>G88637<br>T13564<br>B69680                           |   |
| hypothetical prote protein-tyrosine k | erychrocyte-bindin<br>hypothetical prote<br>infected cell prot<br>retrovirus related | hypothetical prote transforming prote hypothetical prote | hypothetical prote hypothetical prote nitrate reductase | protein FS3H1.4 (i<br>microtubule-associ<br>para-nitrobenzyl e |   |

## ALIGNMENTS

```
hypothetical protein DKFZp564L0716.1 - human (fragments)
C;Species: Homo sapiens (man)
C;Date: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 20-Sep-19
C;Accession: T14787
R;Duesterhoeft, A.; Lauber, J.; Mewes, H.W.; Gassenhuber, J.; Wiemann, S.
  A;Map position: 19p13.3
A;Introns: 594/1; 637/3; 650/3
A;Note: F21856_2
   Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 215; Conservative C
  1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   585 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  61 VWGWEVAGAPALRLOKSOSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
  0;
  Score 1132; DB 2;
Pred. No. 8.5e-84;
); Mismatches 0;
  UNIPARC: UPI00000745CD; EMBL: AC004030; NID: 92804590;
  20-Sep-1999 #text_change 20-Sep-1999
   679
   Length
   Indels
  0
  Gaps
  180
  120
   584
  524
   60
```

August 1999

```
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-119;120-321 <DUE>
A;Residues: 1-119;120-321 <DUE>
A;Cross-referances: UNIPARC:UPI000017C19B; UNIPARC:UPI000017C19C; EMBL:AL110268
A;Experimental source: fetal brain; clone DXFZp564L0716
A;Experimental source: fortal brains a +1 frameshift near codon 119
                     S
  밁
  Ś
   문
   Ś
  멍
  hypothetical protein M142.6 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 09-Jul-2004 C;Accession: T23764; T27112
   S
   밁
   Ş
   8
   A;Residues: 1-1048 <WIL>
A;Residues: 1-1048 <WIL>
A;Cross-references: UNIPROT:O45962; UNIPARC:UPI0000082454; EMBL:Z73428; PIDN:CAA97810.1
A:Experimental source: clone M142
   submitted to the EMBL Data A; Reference number: Z19795 A; Accession: T23764
  밁
  밁
  8
  A;Residues: 1-1048 <WI2>
A;Cross-references: UNIPARC:UPI0000082454;
   A; Experimental source: clone R; Steward, C.
   R;McMurray, A.
   A; Introns: 21/3; 122/3; 381/3; 579/3; 647/2; 683/1; 783/2; 855/1; 871/2;
  A;Status: preliminary; translated from GB/EMBL/DDBJ
   N;Reference number: Z20313
N;Accession: T27112
  Molecule type: DNA
  Experimental source: clone Y52D3
  Status: preliminary; translated from GB/EMBL/DDBJ
  Gene: CESP:M142.6
  ibmitted to the EMBL Data Library, September 1997
   Map position: 3
   Genetics:
  Matches
  Query Match
   Local
   Local Similarity
  572
                       163
   114
   526
  156
   66 VAGAPALRLQKSQSSDLLERERESVLRREQEVAEER--
   ω
  49;
   Similarity
  LPGGPVVMIPQQQMVPPPQSMTPVGGPMGPMGPMTPSI--PVQVPPNTMWTATSPTGSVI
   PQPMPMLIGYDMPGAPMM-----QATEVLTADGQMVNGTPQRVVIMQ-
  QAQVPHVWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPT- 113
   PRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLR--PLRFR-----APDEPQ 54
   LMEDYETHKSKRRERMD------DSSVLEATRVNRRKSALALRWEAGIYANQEEE
  VEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
   YKTAPGKIEKVKPPPSPTTEGPSLQPDLAPEEAAG-----TQRP----
  MVGPFKLRSRKQRTLSMIEEBIRAAQEREEELKRQRQVLQSTQSPRTKNA--PSLPSRTC
  PNRMGYSSDAPPFIPSHQQQPP----PQ----FFNSQHLPQRFRGGRQRGAPPPPP
  Conservative
  Conservative
-APPGQRKKEQWYAGINPSDGI---NSEVLEAIR 192
   -----FSPTPDENSDONSRSSSOASGITGSYSVSESPFFSPIHLHSNVAWT
   PDENSDQNSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDS--
   9.0%; Score 101.5;
22.6%; Pred. No. 3.3
   10.4%;
  Library,
   Score 118; DB 2
Pred. No. 0.034;
4; Mismatches
  May
  Mismatches
  EMBL: Z99276; PIDN: CAB16481.1;
  DB 2;
  2
  83;
  46;
  Length 321
  Length 1048;
  Indels
  Indels
   ----RNALFPEV----
  59;
  58;
   ---SPTH
   909/1;
  GSPDB:GN00021;
   269
  629
   162
   525
  318
  155
  224
   109
  밁
    밁
```

```
immediate-early protein - suid herpesvirus 1 (strain Kaplan) (;Species: suid herpesvirus 1 (;Date: 30-Sep-1993 #text_change C;Date: 30-Sep-1993 #text_change C;Accession: A45344 R;Vlcek, C.; Kozmik, Z.; Paces, V.; Schirm, S.; Schwyzer, M. Virology 179, 365-377, 1990 A;Title: Pseudorables virus immediate-early gene overlaps with a A;Reference number: A45344; MUID:91021039; PMID:2171211 A;Accession: A45344
   myosin - Acetabularia cliftonii
C;Species: Acetabularia clifton:
C;Date: 19-May-2000 #sequence_ru
C;Accession: A59251
  RESULT 5
A45344
   A;Molecule type: DNA
A;Residues: 1-1446 < TUC>
A;Cross-references: UNIPROT:P33479; UNIPARC:UPI000012D219; GB:M34651; NID:g334070; PIDN::
C;Superfamily: herpesvirus immediate-early protein IE175
C;Keywords: DNA binding; early protein; transcription regulation
  C;Accession: A59251
R;Vugrek, O.; Menzel,
                               Ś
   멼
   Ś
  밁
  ঠ
   Ś
   밁
   8
   밁
  S
  A;Gene: myo2
A;Genetic code: 
F;97-799/Domain:
  A; Status: translation not shown
  밁
   A;Cross-references: UNIPROT:004146; UNIPARC:UPI00000A9550; GB:U94398; NID:g2051982;
  A;Residues: Ī-1145 <VUG>
   A; Molecule type: mRNA
  A; Status: preliminary; not compared
   A;Accession: A59251
   A; Reference number: A59251
  A; Description: Molecular
   submitted to GenBank, March 1997
  Matches
   Species: Acetabularia cliftonii
Date: 19-May-2000 #sequence_revision
  Query Match
  Query Match
  Genetics:
  Matches
   Local Similarity
   Local
   code: SGC5
  630 YPAASPPGQPPHTIWIQSI----GVFKRKSNFLKIVR
  789
  20 ASKPPR-----GCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWG----WEVAG
  40;
  6 LSESSGK-----PLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAP-DEPQQAQ 57
  60;
   Similarity
   VDHYAG-EVT-----YQTNQLMDXNRDYVASEHQALMMASNDVLLVSLFEESDDQN
   VPHVWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDEN 117
VAAARLAEAAARPGPAEPAPGLPPLWPEQPGLVVPAPAAAAGAPSGLPGSGPSSPASTK 848
  SDONSRSSSOASGITGSYSVSESPF 142
   LLEGGGKNKAKGIFPLI--DEACKMPNVTYQNLANSLRTQLAGLE--RFEAPKKDPNAFT 597
  AAQPGRVPRELADACVLACRGVLE----RLLPCPLRL---PAPARAPAALGPACLEEVTA 728
  SDSNSENSSSNANVRNARNGNOSSF 672
   ALLALRDAIPGAGPAERRQAADSVALVARTVAPLVRYSVDGARAREAAWTYAAALFAPAN 788
  Conservative
  myosin
  Conservative
  motor domain homology <MMO>
  analysis
   8.9%;
   8.5%;
21.5%;
   -PALRLQKSQSSDLLERERESVLRREQEVAEERRNA----
  23;
   Score 96; DB
Pred. No. 14;
   Score 101;
Pred. No. 4
  of the cDNA coding
  with
  Mismatches
  Mismatches
   LFPE--
  19-May-2000 #text_change 09-Jul-2004
  conceptual
  B
  띪
  1;
  2
  62;
  Length 1446;
  translation
   for
  Length 1145;
  Indels
  Indels
  an unconventional
  114;
  an
                                     ---VFSPTPDE 116
  oppositely oriented
  Gaps
  Gaps
   647
   104
  myosin
   from
   PIDN
  ð
   C,
```

| · .      | Qy 64 WEVAGAPALRLQKSQSSDLLERERESVLRREGEVABERRNALPPEVFSPTPDENSDQN 121                                                                                                                                                                                                                            |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | Query Match 8.3%; Score 93.5; DB 2; Length 699; Best Local Similarity 24.3%; Pred. No. 8.7; Matches 45; Conservative 19; Mismatches 68; Indels 53; Gaps 6;                                                                                                                                      |
| e; serin | C;Genetics:<br>A;Gene: nimA<br>C;Keywords: ATP; autophosphorylation; nucleus; phosphoprotein; phosphotransferase<br>F;9-295/Domain: protein kinase homology <kin><br/>F;11-25/Region: protein kinase ATP-binding motif</kin>                                                                    |
| 5; PIDN: | A;ACCEBBLOH: A43/34<br>A;Molecule type: DNA<br>A;Residues: 1-699 <osm><br/>A;COSB-references: UNIPROT:P11837; UNIPARC:UPI000013018A; GB:M20249; NID:g16806</osm>                                                                                                                                |
| ne that  | R.Obemani, S.A., Pu, R.T., Morris, N.R.  R.Obemani, S.A., Pu, R.T., Morris, N.R.  Cell 53, 237-244, 1988  A;Title: Mitotic induction and maintenance by overexpression of a G2-specific gene A;Title: number: A43734; MUID:88194523; PMID:3359487                                               |
| •        | RESULT 7  A43734  probable protein kinase nimA (EC 2.7.1) - Emericella nidulans C/Species: Emericella nidulans, Aspergillus nidulans C/Species: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 31-Dec-2004 C/Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 31-Dec-2004 |
|          | 251 ESLSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS                                                                                                                                                                                                                                                      |
|          | OV 108 -EVFSPTPDENSDONGRSSSOASGITGSYSVSESPFFSPIHLHSNVAWTVE-DPVDSAPP 165                                                                                                                                                                                                                         |
|          | 66 VAGAPALRLQKSQSSDLLERERESVLRREQEVABERRNA-LFP                                                                                                                                                                                                                                                  |
|          | Qy 12 KPLSTKQEASKPPRGCPQANRGVVRWE-YFRLRPLRFRAPDEPQQAQVPHVWGWE 65 : : :          ::                                                                                                                                                                                                              |
|          | Query Match 8.3%; Score 94.5; DB 2; Length 862;<br>Best Local Similarity 26.1%; Pred. No. 9.4;<br>Matches 47; Conservative 24; Mismatches 72; Indels 37; Gaps 9;                                                                                                                                |
|          | A;Accession: T46289 A;Status: preliminary A;Molecule type: mRNA A;Residues: 1-862 <aaa> A;Cross-references: UNIPROT:Q9NT23; UNIPARC:UBI000006E24D; EMBL:AL137579 A;Cross-referental source: adult testis; clone DKFZp434A1010 C;Genetics: A;Note: DKFZp434A1010.1</aaa>                         |
|          | R;Duesterhoeft, A.; Lauber, J.; Mewes, H.W.; Gassenhuber, J.; Wiemann, S. submitted to the Protein Sequence Database, January 2000 A;Reference number: Z23035                                                                                                                                   |
|          | RESULT 6 T46789 Typothetical protein DKFZp434A1010.1 - human (fragment) hypothetical protein DKFZp434A1010.1 - human (fragment) C;Species: Homo sapiens (man) C;Species: 04-Feb-2000 #sequence_revision 04-Feb-2000 #text_change 09-Jul-2004 C;Accession: T46289                                |
|          | Db 894 RRPGDGEEDEGLSGAALRGDGHGHRDDEED 923                                                                                                                                                                                                                                                       |
|          | 849                                                                                                                                                                                                                                                                                             |
|          | IHLHSNVAWTVEDPVDSAPPGQ                                                                                                                                                                                                                                                                          |

```
A;Molecule type: DNA
A;Residues: 1-329 <STO>
A;Cross-references: UNIPROT:Q9KEUO; UNIPARC:UPI00000C399D; GB:AP001509; GB:BA000004; NII
A;Experimental source: strain C-125
C;Genetics:
   R;Takami, H.; Nakasone, K.; Takaki, Y.; Maeno, G.; Sasaki, R.; Masui, N.; Fuji, F.; Hira Nucleic Acids Res. 28, 4317-4331, 2000
A;Title: Complete genome sequence of the alkaliphilic bacterium Bacillus halodurans and A;Reference number: A3650; MUID:20512582; PMID:11058132
A;Accession: G83744
  uricase BH0759 [imported] - Bacillus halodurans (strain C-125)
C;Species: Bacillus halodurans
C;Date: 01-Dec-2000 #sequence_revision 01-Dec-2000 #text_change 09-Jul-2004
  문
   8
  밁
   8
  밁
   5
   STP4 protein - yeast (Saccharomyces cerevisiae)
N;Alternate names: protein D2690; protein YDL048c
C;Species: Saccharomyces cerevisiae
C;Date: 12-Jul-1996 #sequence_revision 13-Sep-1998 #text_change 09-Jul-2004
C;Accession: S78573; S67581; S67582
  밁
   밁
   8
  문
   श
  A;Gene: BH0759
C;Superfamily: urate oxidase
A;Molecule type: DNA
A;Residues: 'MLVSSSPASSIDSVM',1-170 <PAU>
A;Cross-references: UNIPARC:UPI0000168B82; EMBL:Z74096; MIPS:YDL048c
   A; Reference number: S67560
   A; Reference number: A; Accession: S78573
   submitted to the Protein Sequence Database, May 1997
A;Reference number: S78573
   R; Volckaert, G.
   A;Status: preliminary
   A; Accession: S67581
   Accession: G83744
  Matches
   Query Match
  Local Similarity
  471 ISIASLSLSPRRTSATYSG----
  162
  411
  511 DDEDD 515
  122
  142 QTSDLLFQQEESV-------KPFAKVEVRRMDTEYKVMEQLSGIQGLRLI 184
  233 RYVSAEQVAAIAYT 246
  181 DGINSEVLEAIRVT 194
  185 KVKESSFYGYIQDEYTTLPEAYDRPLFLYLNMFWAYENPEDA---
  136 SVSESPFFS-----
   78 QSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITG--SY 135
  SRSSSQASGITGSYSVSESPFFSPIH-----LHSNVAWT-----VEDPVD------
  ----SAPPGORKKEOWYAGINPSDGINSEVLEAIRVTRHKNAMAERWESR-----IYA 210
  SSSNSEDSDFPSSTDISQLSLESPTNKAAKLPKKESRTPFTRSKTVVDSPMDIQMAEPSP 470
  SEEDD 215
  Conservative
  8.2%; Score 93; DB
24.6%; Pred. No. 3.7;
ative 16; Mismatches
  --PIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
  DB 2;
   39;
  Length 329;
   KNIFAEGERKRPKFEPTLAYS 510
   Indels
   46;
   -TGIKPD
   Gaps
   161
```

```
R;Labeit, S.; Kolmerer, B.
Science 270, 293-296, 1995
A;Title: Titins: giant proteins in charge of muscle ultrastructure and A;Reference number: A57430; MUID:96026330; PMID:7569978
A;Accession: I38346
                                 밁
   ঠ
   В
   밁
   S
  片
  Ś
  밁
  A,Experimental source: strain S288C
A;Note: this sequence has been revised in reference S78573
R;Urrestarazu, L.A.; Andre, B.; Vissers, S.
submitted to the Protein Sequence Database, July 1996
   á
  C;Species: Homo sapiens (man)
C;Date: 29-May-1998 #sequence_revision
  ð
  Ś
   A;Cross-references: UNIPARC:UPI000006A7F5; A;Experimental source: strain S288C
   A; Reference number: S67535
A; Accession: S67582
  A; Molecule type: mRNA
A; Residues: 1-7962 < RES>
   C; Accession: I38346
   elastic titin - human (fragment)
   밁
  F;306-326/Region: zinc finger CCHH motif
  A; Description: involved in pre-tRNA splicing
  A; Map position: 4L
  A;Gene: SGD:STP4
  A; Molecule type: DNA
   A; Cross-references:
   A;Cross-references: SGD:S0002206; MIPS:YDL048c
   A;Residues: 1-490 <URR>
   Status: preliminary; translated from GB/EMBL/DDBJ
   Function
   Gene: GDB:TTN
  Genetics:
   Matches 43;
  Genetics:
  Matches
  Query Match
   Query Match
   Keywords: zinc finger
  Cross-references:
   position:
  Local Similarity
   Local Similarity
                                   6069
   211
   297
  246
 133
  192
  98
   50
  13
   73
  43;
  WTVEDPVDSAPPGORKKEOWYAGINPSDGINSEVLEAIRVTRHKNAMAERWES---RIYA 210
                                   ----KKKVPEERKPVPRKEEEVPPPPKVPALPK--KPVPEEKV--
   PVAKKKEA--PPAKVPEVQKGVVTEEKITIVTQREESP-PPAVPEIP------
   PLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPAL
   RESDN
   SEEDD
   LTPEDRPHKCPICQRGFAR----
  ----PSIHSPLTNEHTSRYSSSLKDSAKITKORKKKECPICHNFYANLSTHKSTH
  ABERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVSESP----FFSPIHLHSNVA 153
  PSPPTQHQSILPTAVDNVPRSKSVSSLPVSGFPPLIVKQQQQQQLNSSSSASAL-----
   PDEPQQAQ------VPH---VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEV 97
GSYSVSESPFFSPIHLHSNVAWTVEDPV-DSAPPGQRK-----KEQWYAGINPSDGIN 184
   RLOKSOSSDLLERERESVLRREQEVAEERRNALFPEVFSFTPDENSDONSRSSSQASGIT
  8.2%; Score 92.5;
ilarity 20.5%; Pred. No. 2.
Conservative 30; Mismatche
   Conservative
   215
  GDB:127867; OMIM:188840
   UNIPROT:Q10465; UNIPARC:UPI000011010C; EMBL:X90569; NID:g1017426;
  8.2%;
   23; Mismatches
  Score 93;
Pred. No.
  Mismatches
  29-May-1998 #text_change
  EMBL: 274096; MIPS: YDL048c
   -NNDLI----RHKK---RHWKDEFMQIYA
  and
   BB
   DB 2;
   2
  ä
   65; Indels
  62;
   Length 490
  uptake of branched-chain amino
  Length 7962;
  Indels
  75;
   54;
   09-Jul-2004
   Gaps
  Gaps
  elasticity.
   336
   132
  296
   245
                                   6105
  8909
   8
  9
  acide
   קי
```

```
R;Ishikawa, K.; Nagase, T.; Suyama, M.; Miyajima, N.; Tanaka, A.; Kotani, H.; Nomura, N. DNA Res. 5, 169-176, 1998
A;Title: Prediction of the coding sequences of unidentified human genes. X. The complete A;Reference number: Z14142; MUID:98403880; PMID:9734811
A;Accession: T00354
  RESULT 12
T00354
   hypothetical protein KIAA0692 - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 01-Feb-1999 #sequence_revision 01-Feb-1999 #text_change 09-Jul-2004
C;Accession: T00354
  BEL1-like homeobox 2 protein (BLH2) [imported] - Arabidopsis thaliana C;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 09-Jul-2004 C;Accession: D85435
   밁
  Ś
   A;Molecule type: mRNA
A;Residues: 1-783 <ISH>
A;Cross-references: UNIPROT:075176; UNIPARC:UPI000006F01B; EMBL:AB014592; NID:g3327197;
  S
   문
  á
  밁
   S
  A;Cross-references: UNIPROT:023196; C;Genetics:
   A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-638 <STO>
  A;Title: Sequence and analysis of chromosome 4 of the plant Arabidopsis thaliana. A;Reference number: A85001; MUID:20083488; PMID:10617198
A;Accession: D85435
   R; anonymous, The Eur
Nature 402, 769-777,
  밁
   S
   문
                     S
   A; Note:
  A; Experimental source: brain
   A;Status: preliminary; translated
   밁
  A; Map position: 4
  A; Gene: AT4g36870
  Matches
   Query Match
   Query Match
  8.1%;
Local Similarity 25.0%;
les 35; Conservation
  Local
   KIAA0692
   6106
  6141 FAVPORVEVTRHEVSAEEEWS---YSEEEE 6167
  491 MGMEQEAWRPQRGLPERSVNILRAWLFEHF-LHPYPSDADKHLLARQTGLSRNQVSNWFI 549
   532 EAAEP--GGPHSSRNGLCHPLNHSRTLAGKRPKAPHGEEAHLPPVSDLTVE-FDKLNLON 588
  550 NA--RVRLWKPMVEEMYQQESKEREREEELEENEEDQE
                          77
   14 LSTKQEASKPPRGCPQANRGVVR---WEYFRLRPLRFRAPDEPQQAQV----PHVWGWEV 66
  49;
  Similarity
   The European Union Arabidopsis Genome Sequencing Consortium, The Cold
   AGAPALKLOKSOSSDLL-----EREKESVLKKEQEVAEEKKNALFPEVFSPTPDENSDON 121
SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTP-DENSDQNSRSSSQASGITGSY 135
   TKSNNNESNFTAVRTTSQTP
  SRSSSQASGITGSYSVSESP 141
  SEVLEAIRVIRHKNAMAERWESRIYASEED 214
  EASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEP---QQAQVPHVWGWEVAGAPALRLQK 76
  Conservative
  8.0%;
24.0%;
  38;
  Score 90;
Pred. No.
   Score 92;
Pred. No.
   from
   --AVPVPVAKKAPPPRAEVSKKTVVEEKRFVA---EEKLS 6140
   614
   UNIPARC: UPI00000AA90A;
   Mismatches
  Mismatches
   GB/EMBL/DDBJ
  19;
   10;
   멂
   <u>ب</u>
   2;
   53
'
  , 68
   Length
   Length 783
  Indels
   Indels
   638
   GB:NC_001268; NID:g7270636;
  28;
   28;
  TKNSNDDKS 594
  Gaps
   Gaps
```

```
C;Species: Dictyosterrum crock cylate: 20-Sep-1999 #sequence_revis C;Accession: T14004 C;Accession: T14004 R;Sutch, K. R;Saito, J; Adachi, H.; Sutch, K. R; Saito, J; Adachi, H.; Sutch, K. R; Saito, H.; Sutch, H.; Sutch, K. R; Saito, H.; Sutch, H.; Sutch, H.; Sutch, H.; Sutc
  R;Heim, U.; Baeumlein, H.; Wobus, U. Plant Mol. Biol. 25, 131-135, Plant Mol. Biol. 
  १
   밁
   ঠ
   밁
  ક
   밁
  S
   밁
문
  S
  A,Status: preliminary; translated A,Molecule type: DNA A,Residues: 1-1390 <SAI>
  밁
  S
   밁
  A,Introne: 178/3; 439/3
   A, Status: preliminary; nucleic acid sequence not shown
   trfA protein
  C;Species: Vicia
  A; Introns: 333/3; 364/3; 637/1
   Biol. Chem. 273, 24654-24659, 1998;Title: Dictyostelium TRFA homologous to yeast Ssn6 is Reference number: Z17852; MUID:98406112; PMID:9733762;Accession: T14004
  Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 05-Oct-2004
  Species: Dictyostelium discoideum Date: 20-Sep-1999 #sequence_revision
  Query Match
Best Local 8
  Cross-references: UNIPROT:Q43673; UNIPARC:UPI00000AC87A; EMBL:Z26489; NID:g403335; PII
  Molecule type: DNA
  Cross-references: UNIPROT:077033; UNIPARC:UPI000007E414; EMBL:AB009080; NID:d1228566;
   Residues: 1-564 <HE2>
  Matches
   Gene: trfA
    1204
   691
  193
  647
   136
  589
   269
  66 VAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSS
   7 SESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVW-GWE
   1 MSPRHLSESSGK-----PLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEP

    slime mold (Dictyostelium discoideum)

  Similarity
   Similarity
  SVSESPFFSPIHLHSNVAWTVEDPVD-SAPPGQRKKEQWYAGINPSDGINSEVLEAIR--
   SOASGITGSYSVSESPFFSPIHLHSNVAW---TVEDPVDSAPPGORKKEQ 172
  DVDPHQFPAVHRWKSAVLCYSPSD 714
  -VTRHKNAMAERWESRIYASEEDD 215
  SLSPS
   IGR9--VSKTPDESTKTKDQILTSRINAVERDLLEPSPADQLGNGHRRTESEMSARIAKM
VEPTHKDKESSKNDDTTTTTTTTTKSAKSPNSSPTRSDEVV
   bean
faba (fava bean)
   Conservative
  Conservative
  -HGKHSKKEEEDEDEPRSYESRKWKKHTEEKKRESHGRGEEKQEQ
  7.9%;
  7.8%;
23.5%;
   -SAELQEEEQQSHSQGEEEEEEEEEQQRHRERYSEKEDEDEDEKEEQE
  27;
  Score 88;
Pred. No.
  Score 89.5;
Pred. No. 14
   from
  -EDQLEVTREPARR--
  Mismatches
  Mismatches
  20-Sep-1999 #text_change
   GB/EMBL/DDBJ
  DB
57;
   DB 2;
  2
  61;
  58;
  -LFLFGEBPSK-LDQDVLAALECA
  Length 1390
   -RLRSPRD-QRGQIVKVENGLD
  Length 564;
  Indels
   faba
   required
   legumin
  43;
    -EPHQDASQEEI 1256
  09-Jul-2004
   for
  363
   Gaps
   gene encoding
   normal growth
   646
   53
   268
  125
  8
   a hig
```

Search completed: March Job time: 14.5811 secs

ω

2006,

```
A;Description: Arabidopsis thaliana
A;Reference number: Z14609
A;Accession: T02195
  RESULT
T02195
  밁
   S
  片
  ঠ
   Nature 402, 761-768, 1999
A,Title: Sequence and analysis of chromosome 2 of the plant Arabidopsis thaliana
A,Reference number: A84420; MUID:20083487; PMID:10617197
  A;Cross-references: UNIPROT:O80732; UNIPARC:UPI000009E59E; EMBL:AC004411; NID:g3522932; A;Experimental source: cultivar Columbia A;Experimental source: cultivar Columbia R;Lin, Kaul, S; Rounsley, S.D.; Shea, T.P.; Benito, M.I.; Town, C.D.; Fujii, C.Y.; R;Lin, K.; Kaul, S; Rounsley, S.D.; Shea, T.P.; Benito, M.I.; Town, C.D.; Fujii, C.Y.; M.; Koo, H.; Moffat, K.S.; Cronin, L.A.; Shen, M.; Vannaken, S.E.; Umayam, L.; Tallon, L. euss, D.; Nierman, W.C.; White, O.; Bisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, Cess, D.; Nierman, W.C.; White, O.; Bisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, Cess, D.; Nierman, W.C.; White, O.; Bisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, Cess, C.M.; Venter, C.M.;
   C;Accession: T02195; H84908
R;Rounsley, S.D.; Lin, X.; Kaul, S.
submitted to the EMBL Data Library,
   hypothetical protein At2g46920 [imported] - Arabi
N;Alternate names: hypothetical protein F14M4.25
C;Species: Arabidopsis thaliana (mouse-ear cress)
  5
   밁
   밁
  S
  á
   A; Introns:
   A;Cross-references: UNIPARC:UPI00009E59E; GB:AE002093; NID:g3522957; PIDN:AAC34239.1;
   A; Molecule type: DNA
A; Residues: 1-814 <STO>
밁
   A; Map position:
  A;Gene: F14M4.25; At2g46920
  A; Status: preliminary
   A; Accession: H84908
   A; Molecule type: DNA
   A;Status: translated from GB/EMBL/DDB:
   Best
  Date: 05-Mar-1999 #sequence_revision
  Query Match
  Genetics:
   Residues:
   Local
  1309
  1257
376
   320
   268 PESCLESNRN-LOWAH------GKAGEDRVHVVLSEEQGWLFIGIYDGFSGPDAPDFVM 319
  680/3; 718/3
ily: Arabidopsis thaliana hypothetical
   54
  24 PRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGW-----EVAGAPALRLQK 76
   1-814 <ROU>
   Similarity
   QQAQVPHVWGWEVAGAPALRLQ-----KSQSSDLLERERESVLRREQEVAEERRNALFP 107
  EI----KDSKSSSSSSSSSSTNTGSSSTNSS 1337
  VSESPFFSPIHLHSNVAWTVED--PVDSAPPGQR------KKEQW 173
   SHLYKAIDKELEGLLWDYEEPSED--NQLQPDQEPPTEENMCDPESISEQHSKSVVAE--
  SQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYS 136
   EVFSPTPDENSDONSRSSSOASGITGSYSVSES
    -SEEVMIDDISSIGNIDIQIADGPPGDSAGPGKKSMRLYELLQLEQW
   Conservative
  X.; Kaul, S.; Shea,
   22.8%;
  -DITSTPSKRLKPDSTPSSATTASTPSEQPESPLKKENPVGE-
   25;
   Score 87;
Pred. No.
   September 1998 chromosome II 1
   Mismatches
   05-Mar-1999

    Arabidopsis

  T.P.;
  DB 2;
  Fujii, C.Y.; Mason, T.M.; Shen,
   protein At2g46920
   74;
   #text_change
  Length 814
   Indels
   F14M4
  thaliana
   genomic
        421
   30;
   09-Jul-2004
   Gaps
```

ξ

This Page Blank (Uspia)

Sequence:

Perfect score:

Title:

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

1 MSPRHLSESSGKPLSTKQEA...

.HKNAMAERWESRIYASEEDD

US-10-646-873-47

Post-processing: Minimum Match Maximum Match

Listing

Match

100% Ç

45 summaries

Minimum DB Maximum DB

seq length: 0 seq length: 2000000000

Total number of hits satisfying chosen parameters:

2166443

2166443 ведв,

705528306 residues

욧

protein -

protein search, using

₩8

mode1

GenCore Copyright (c) 1993

version - 2006

5.1.7 Biocceleration

March

3, 2006, 13:19:17;

Search time 82.1137 Seconds (without alignments)
1847.299 Million cell updates/sec

```
RESULT
CS021_H
    STEER BRREAKTER AREA REALER RE
  RA Strausberg R.D., Felingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Blatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Blatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Bownstein M.J., Ugdin T.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Ugdin T.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Rosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Rahey J., Helton B., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA Mitting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J.M., Warra M.A.;
"Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences.";
Proc. Matl. Agad Sci. U.S. A. 99:16899-16903 (2002).
   13-SEP-2005 (Rel.
13-SEP-2005 (Rel.
13-SEP-2005 (Rel.
Protein C19orf21.
  1 HUMAN
CS021 HI
QBIVTZ;
HGNC; HGNC: 27
Coiled coil.
COILED 5
SEQUENCE 67
   Name=C19orf21;
Homo sapiens (
  TISSUE=Brain, and Colon;
MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
  Mammalia;
   This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
   Ensembl; ENSG00000099812;
   86
   ween the Swiss Institute of Bioinf
European Bioinformatics Institute
  _TaxID=9606;
   93.5
93.5
93.5
93
  T00636; T00636.
   BC042125;
BC052236;
   HUMAN
   HGNC:27000; C19orf21.
   long
  Eutheria;
  SEQUENCE
  (Rel. 48, Created)
(Rel. 48, Last sequence up
(Rel. 48, Last annotation
   as its content is
   Acad. Sci. U.S.A. 99:16899-16903(2002).
   (Human)
   STANDARD;
  AAH42125.1;
AAH52236.1;
   1446
1446
239
414
771
1287
1287
1781
1781
699
699
329
   [LARGE SCALE MRNA].
  Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Primates; Catarrhini; Hominidae;
  Homo
  1E18 PRVKA
Q5PP75 PALPH
Q4Q1HB LEIMA
Q7XIB4 ORYSA
Q7XIB4 ORYSA
Q52GS1 MAGGR
Q51G14 AXANOR
TCGAP HUMAN
Q60M49 CAEBA
Q9H7C7 HUMAN
Q4SP6 TETING
NIMA_EMENI
  Q5AQC6_EMENI
Q9KEU0_BACHD
Q07351_YEAST
   4.4
   Ħ
   mRNA.
  sapiens
  ALIGNMENTS
   g
   update)
   way modified and
   update)
  There are no
   B
   this statement
   Q5p21
Q4q1h8
Q4q1h8
Q7xie4
Q7xie4
Q52g81
Q51149
Q1499
Q60w49
Q60w49
Q9h7c7
Q488p6
P11837
Q58eu0
Q9Keu0
  homo sapien
caenorhabdi
homo sapien
tetraodon n
emericella
  aspergillus
bacillus ha
  magnaporthe
xanthomonas
  oryza sativ
   guid
   leishmania
  pseudorabie
  outstation -
   human
   herpes
   is not
```

Regult No.

Score

Query

Length

띪

Description

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

UniProt\_05.80:\*
1: uniprot\_sprot:\*
2: uniprot\_trembl:\*

101.5 101.5 101 100.5

Q5 ÄWO DROME
Q4 PBW3 USTWA
Q5 STD8 CRYNE
Q5 KIN7 CRYNE
Q5 KIN7 CRYNE
Q4 Q354 LEIVA
Q4 Q355 DROME
Q4 Q356 DROME
Q4 Q36 CARELL
Q4 Q4 CACECL
Q8 W5 4 COUCO
Q8 W5 AT
Q7 WNO NEUCR
Q7 WNO NEUCR
Q7 WNO NEUCR
Q6 S2N7 GYSAA
Q4 FLN2 TETNG
Q6 S2N7 GYSAA
Q4 FBG3 USTWA
Q4 GUSTWA
Q4 GUSTWA
Q4 GUSTWA

P70279 Q9v550 Q45962

mus musculu mus musculu drosophila caenorhabdi

Q4q354 Q69zn9

Q9w539 Q56aw0 Q4pbw3 Q55tp8 Q5kin7

ustilago ma cryptococcu

cryptococcu

leishmania

Q9h4g2 Q9u118

homo sapien homo sapien drosophila drosophila

homo sapien

O04146 Q8w846 Q8vib2 Q7rwn0 Q7rx41 Q4rln2 Q652n7 Q4pe83 Q4ijy6 Q788i7

rattus norv oikopleura acetabulari

neurospora
neurospora
tetraodon n
oryza sativ
sustilago ma
sustilago ma

**Α** 

569 75357 MW;

Potential

D2881CF5087E61F8 CRC64;

97 98 97 98 96 96

105 104.5 103 102

786.5 127.5 127.5 1120.5 118.5 118.5 114.5 114.5 108.5 108.5

CS021 HUMAN
CS021 PONPY
CS021 MOUSE
AKAP2 HUMAN
Q5T721 HUMAN
Q5T721 HUMAN
Q5X709 XENLA
Q5U301 RAT

Q9y2d5 Q5t721

homo homo pongo

musculu sapien

sapier pygma

Q5xg09

xenopus lae rattus norv

```
RESULT 2
CS021 POW
ID CS021
CS021
CS02
AC QSRE
DT 13-{
   ş
  밁
밁
   Ś
  밁
  ঠ
   밁
  Ś
   밁
  S
  밁
   ঠ
  밁
   ક
  밁
  Query Match
Best Local
   Matches 202;
  Query Match
   CS021 PO
  Submitted (NOV-2004) to the EMBL/GenBank/DDBJ databases.
   Pongo pygmaeus (Orangutan).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
  13-SEP-2005 (Rel. 48, Created)
13-SEP-2005 (Rel. 48, Last sequence update)
13-SEP-2005 (Rel. 48, Last annotation updat
Protein C19orf21 homolog.
   SEQUENCE
  EMBL; CR858675; CAH90887.1;
  NCBI_TaxID=9600;
  Coiled coil.
  NUCLEOTIDE SEQUENCE
  PONPY
  Local Similarity
  Local
  s Swiss-Prot entry is copyright. It is produced through a collabora ween the Swiss Institute of Bioinformatics and the EMBL outstati European Bioinformatics Institute. There are no restrictions on as long as its content is in no way modified and this statement is
   German cDNA consortium;
651
  591
   531
  181
  585
  121
   525
  465
   181
   121
   471
   PONPY
   5
  l Similarity
215; Conserv
   61
  .
  1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
                                 DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   MSPRHLSESSGKPMSTKQEPWKLPRGSPQANRGVVRWEYFRLRPLQFRAPDEPQQAQVPH
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  NSRSSSQASGITGSYSVSESPFFSPIRLHSSLAWTVEDP
   VWGWEVAGAPALRLQKSQSSDLLERERESVLRREREVAEERRNALFPEVFSPTPDESCDQ
   685 AA;
  100.0%;
ilarity 100.0%;
Conservative (
  Conservative
   STANDARD;
  575 F
75892 MW;
   [LARGE SCALE MRNA]
  93.6%;
   -; mRNA.
  0;
   6
  Score 1132;
Pred. No. 1e-
0; Mismatches
  Score 1060; DB 1;
Pred. No. 3.1e-72;
  Potential.
   PRT;
   A3A99F4343396E81 CRC64;
   Mismatches
   685
  update)
   ₽
   DB 1; Length 685;
   DB 1;
   215
   679
685
   <u>.</u>
  Length
   Indels
   Indels
  679;
  EMBL outstation
   a collaboration
   0
   <u>..</u>
  Gaps
   Gaps
  is not
  180
  120
   180
   590
  120
   530
  644
   584
   524
  60
  650
   0
```

RESULT

European Bioinformatics Institute. There are no restrictions of as long as its content is in no way modified and this statement

```
RP MUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].

RN MEDLINE-22354683; PubMed-12466851; DOI-10.1038/nature01266;

RA Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo S.,

RA Nikaido I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa H.,

RA Nikaido I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa H.,

RA Nikaido I., Osato N., Saito R., Nogami A., Schonbach C., Gojobori T.,

RA Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J.,

RA Schrimi L.M., Kanapin A., Matsuda H., Batalov S., Belsel K.W.,

RA Schrimi L.M., Kanapin A., Matsuda H., Batalov S., Belsel K.W.,

RA Blake J.A., Bradt D., Brusic V., Chothia C., Corbani L.E., Cousins S.,

RA Gassterland T., Gariboldi M., Gissi C., Godzik A., Gough J.,

RA Gassterland T., Gariboldi M., Gissi C., Godzik A., Gough J.,

RA Konagaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A.,

RA Konagaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A.,

RA Maglott D.R., Maltais L., Marchionni L., McKenzie L., Miki H.,

RA Magashima T., Numata K., Okido T., Pavan W.J., Pertea G., Pesole G.,

RA Nagashima T., Numata K., Okido T., Pavan W.J., Pertea G., Pesole G.,

RA Ravasi T., Reed J.C., Reed D.J., Reid J., Ring B.Z., Ringwald M.,

RA Sultana R., Schneider C., Semple C.A., Setou M., Shimada K.,

RA Wilming L.G., Wynshaw-Boris A., Yanagisawa M., Yang I., Yang I.,

RA Wilming L.G., Wynshaw-Boris A., Yanagisawa M., Yang I., Yang I.,

RA Wilming L.G., Wynshaw-Boris A., Yanagisawa M., Yang I., Yang I.,

RA Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,

RA Mijaraki T., Waki K., Kawai J., Aizawa K., Arakawa T., Fukuda S.,

RA Hara A., Hashizume W., Imotani K., Ishii Y., Itoh M., Kagawa I.,

RA Nitaki A., Sakai K., Sasaki D., Shibata K., Shinagawa A.,

RA Nitaki A., Sakai K., Sasaki D., Shibata K., Shinagawa A.,

RA Natawa S., Fasaki K., Sasaki D., Shibata K., Shinagawa A.,

RA Natawa S., Fasaki K., Kawai J., Alzawa K., Shinagawa A.,

RA Natawa S., Shinaki Y.,

RA Natawa S., Shiraki Y.,

RA Natawa S., Shiraki Y.,

RA Natawa S., Shir
   RC STRAIN=FVB/N; TISSUE-Colon;

RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

RA Strausberg R.L., Peingold E.A., Grouse L.H., Derge J.G.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hong L.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

RA Stapleton M., Ugdin T.B., Toshiyuki S., Carrinci P., Prange C.,

RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

RA Robask S.A., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Willalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

RA Pahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

RA Rhiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

RA Rodriguez A.C., Grinwood J., Schmutz J., Myers R.M.,

RA Rodriguez A.C., Grinwood J., Schmutz J., Myers R.M.,

RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.,

"Generation and initial analysis of more than 15,000 full-length human

"Generation and initial analysis of more than 15,000 full-length human
   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
Muroidea; Muridae; Murinae; Mus.
  13-SEP-2005 (Rel. 48, Created)
13-SEP-2005 (Rel. 48, Last sequence up
13-SEP-2005 (Rel. 48, Last annotation
Protein C19orf21 homolog.
  CS021_MOUSE
Q9D279;
                            This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its
   NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
   60,770 full-length cDNAs.";
Nature 420:563-573(2002).
   "Analysis of the mouse transcriptome based on functional annotation
  NCBI_TaxID=10090;
   Mus musculus (Mouse)
  MOUSE
   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
  and mouse cDNA sequences."
   13-SEP-2005
   STANDARD;
  PRT;
   update)
  648
   update)
  Š
   full-length human
   of.
```

```
ARAPZHT ARAPZHT ARAPZHT ARAPZHT ARAPZHT ARAPZHT ARAPZHT ARAPZHT ARAPZHT ARAPZHT ARAPZHTARAPZHAPZHTARAPZHTARAPZHTARAPZHAPZHTARAPZHTARAPZHTARAPZHTARAPZ
  SARRERE
  б
  문
  8
  밁
   ঠ
   片
   8
  Query Match
Best Local Similarity
Matches 154; Conser
  HUMAN
AKAP2_I
   EMBL; AKO20266; BAB32049.1; -; mRNA.
EMBL; BC013508; AAH13508.1; -; mRNA.
Ensembl; ENSMUSG00000035852; Mus musculus
MGI; MGI:1926156; 9130017N09Rik.
  Q9Y2D5; Q9UG26;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
13-SEP-2005 (Rel. 48, Last annotation updat
  SEQUENCE
   Coiled coil.
   Nagase T., Ishikawa K.-I., Suyama M., Kikuno R., Hirosawa Miyajima N., Tanaka A., Kotani H., Nomura N., Ohara O.; Miyajima N., Tanaka A., Kotani H., Nomura N., Ohara O.; Prediction of the coding sequences of unidentified human The complete sequences of 100 new cDNA clones from brain to large proteins in vitro.";
  NUCLEOTIDE SEQUENCE [MRNA] (ISOFORM A).
SCHUETZE N., Reichel S., Ruecker N., Lechner A
"Homo sapiens AKAP-2 complete cDNA sequence.";
submitted (DEC-2000) to the EMBL/GenBank/DDBJ
   removed
  The German cDNA consortium; submitted (AUG-1999) to the
   NUCLEOTIDE SEQUENCE [LARGE TISSUE-Brain;
  TISSUE=Brain;
   NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] (ISOFORM
   NCBI_TaxID=9606;
   Name=AKAP2; Synonyms=KIAA0920
  A-kinase anchor protein 2
   MEDLINE=99246063; PubMed=10231032;
  domo sapiens (Human)
  (PRKA2) (AKAP-2).
   mitted (AUG-1999) to the EMBL/GenBank/DDBJ databases. FUNCTION: Binds to regulatory subunit (RII) of protein kinase May be involved in establishing polarity in signaling systems in integrating PKA-RII isoforms with downstream effectors to capture, amplify and focus diffuse, trans-cellular signals can
  capture, amplify and foct
by cAMP (By similarity).
ALTERNATIVE PRODUCTS:
Event=Alternative splicit
   612
  179
  120
  492
   434
   HUMAN
   62
   N
   SPRHVSESSGRSLSSKOEWSKPPG--KATNVGVVRLGNFHLRPLRFKVPDVPQGTETPHT
   SPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHV
  QNSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDFVDSAFFGQR-KKEQWYAGIN
   WGWEVAGAPALRLOKSOSSDLLERERESVLRREQEVASERRNALFPEVFSPTP--DENSD
   PSDGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
  WGWEVAGGPILRLQKSQSSDLLEREMESVLRREREVAEERRNAFFPEVFSPVPAEDESHE
   PSDSVNSEVLGATRVKRHKNLLAERWEAHTYASEDEN
  Eutheria;
   Metazoa;
  648 AA;
   Conservative
   STANDARD;
  534 I
72281 MW;
  Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Primates; Catarrhini; Homin
   69.5%;
     splicing;
   (Protein
  22;
   SCALE MRNA]
  Score 786.5; DB Pred. No. 2e-51;
  Potential.
; 1E395B70763B3D1F CRC64;
   Mismatches
       Named isoforms=2
  ion update)
kinase A a
  1103
   Lechner A., Eulert
   ဝူ
  ₹
   770-1103
  DB 1;
   anchoring
   36;
   databases
  648
   215
   ع
   Indels
   Length
   d human genes.
brain which c
   (ISOFORM
   protein
   ٠
;
   3
   5
   Hominidae;
  8
   Jakob
   code
  carried
   Gaps
  XIII.
   or P
   Ŧ.
  119
   61
   611
   178
   551
   491
```

```
RESULT 195T21 ID 795T21 ID
   δ
  밁
   5
   밁
   ঠ
  밁
  Ś
  밁
  Query Match
Best Local S
Matches 45
  GO; GO:0019899; P:enzyme Alternative splicing; CC REGION 797 810 117 COILED 3 117 COILED 483 521 COILED 940 980 COMPBIAS 512 521 VARSPLIC 1059 1071
   CONFLICT
SEQUENCE
   EMBL; AJ303079; CAC38839.1; -; mRNA. EMBL; AB023137; BAA76764.2; ALT INIT; 1 EMBL; AL110268; CAB53707.1; -; mRNA. Ensembl; ENGG00000157654; Homo sapiens HGNC; HGNC; 372; AKAP2.
  01-FEB-2005 (TrEMBLrel. 29, Created)
01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
13-SEP-2005 (TrEMBLrel. 31, Last annotation updat
A kinase (PRKA) anchor protein 2.
Name=AKAP2; ORFNames=RP11-470J20.3-001;
   MIM;
   This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on it
   Q5T721 HUMAN PRELIMINARY;
Q5T721;
  removed.
   Eukaryota;
  Submitted
   NCBI_TaxID=9606;
   Mammalia; Eutheria;
  Homo sapiens
  NUCLEOTIDE
  Lawlor
   NUCLEOTIDE
   HUMAN
   Name=B;
IsoId=Q9Y2D5-2;
  1099
  1039
  214
  936
   156
   Note=No
  IsoId=Q9Y2D5-1;
  66 VAGAPALRLOKSOSSDLLERERESVLRREQEVAEER---
  45;
  long
  Ø
   Similarity
   MVGPFKLRSRKQRTLSMIEEEIRAAQEREEELKRQRQVLQSTQSPRTKNA--PSLPSRTC
  路 ::
  B
   YKTAPGKIEKVKPPPSPTTEGPSLQPDLAPEEAAG--
   LMEDYETHKSKRRERMDDSSYTSKLLSCKVTSEVLEATRVNRRKSALALRWEAGIYANQE
    (MAY-2005)
  (MAY-2005)
   Metazoa;
   878
1103
  SEQUENCE
   SEQUENCE
  1100
  ag
  Conservative
  215
  (Human)
   9Y2D5-2; Sequence=VSP_00409 experimental confirmation
   ĀΑ;
   F:enzyme
   878
  content is
   Euarchontoglires;
   Chordata;
   11.3%;
24.7%;
    ដ
  ç
   122071 MW;
  Sequence=Displayed;
   Coiled
    the
  the
   binding;
  35;
  Potential.
Potential.
Poly-Gln.
    EMBL/GenBank/DDBJ
  EMBL/GenBank/DDBJ
   Pred. No.
   Score 127.5;
   Missing (in isofo
/FTId=VSP_004096
E -> G (in Ref. )
  .E
  Potential
   PKA-RII subunit
   Craniata;
   PRT;
  Mismatches
  no way modified and this statement
   B501182135112FE5
   NAS.
  004096;
   1103
  mRNA.
   n; Vertebrata; Euteleostomi;
Primates; Catarrhini; Homin
   available;
   . 58;
  isoform
   B
   DB
  update)
   binding
  53;
   ω
.
   ۲,
        databases
  databases
  В
   Length 1103;
   CRC64;
  Indels
  ----RNALFPEV----
   domain
  49;
   ----KNLMQT
   Hominidae;
   collaboration
6 outstation -
  Gaps
   8
   1038
   155
  993
  109
   213
  noc
  9
```

```
RESULT
Q5XG09
ID Q5
AC Q
  S
   밁
   S
  밁
   ð
   밁
  닭
   ঠ
   Query Match
Best Local S
Matches 45
  Q5XG09;
Q5XG09;
   Submitted [4]
  LOC495240 protein.

Name=LOC495240;

Xenopus laevis (African clawed frog).

Eukaryota; Metazoa; Chordata; Craniata; Veramphibia; Batrachia; Anura; Mesobatrachia;

Xenopodinae; Xenopus; Xenopus.
  EMBL;
EMBL;
EMBL;
   EMBL;
EMBL;
EMBL;
EMBL;
   EMBL;
EMBL;
EMBL;
EMBL;
EMBL;
EMBL;
  EMBL;
EMBL;
EMBL;
   25-OCT-2004 (TrEMBLrel.
25-OCT-2004 (TrEMBLrel.
25-OCT-2004 (TrEMBLrel.
  Submitted
  Kimberley
  NUCLEOTIDE SEQUENCE
   SEQUENCE
   1039
   ALISSING CALIZANA. 1 | ALISBEZS CALIZANS. 1 |
   1099
   214
  994
   156
   9
   Similarity
  田田
   B
  LMEDYETHKSKRRERMDDSSYTSKLLSCKVTSEVLEATRVNRRKSALALRWEAGIYANQE
  YKTAPGKIEKVKPPPSPTTEGPSLQPDLAPEEAAG-----
  MVGPFKLRSRKQRTLSMIEEEIRAAQEREEELKRQRQVLQSTQSPRTKNA--PSLPSRTC
  VAGAPALRLQKSQSSDLLERERESVLRREQEVAEER---
   ENSG00000157654;
  (MAY-2005)
   (MAY-2005)
   1103
  SEQUENCE
  Conservative
   PRELIMINARY;
   ₽,
  ----FSPTPDENSDONSRSSSOASGITGSYSVSESPFFSPIHLHSNVAWT
   11.3%;
24.7%;
   ő
   ö
   122071
   28,
28,
   the
   Homo
   35;
  JOINED JO
  MW;
  Last
Last
   EMBL/GenBank/DDBJ databases
  EMBL/GenBank/DDBJ
  Created)
   Pred.
   Score
  Genomic DNA
   sapiens.
  Mismatches
   sequence update)
annotation update)
   B501182135112FE5
   No.
  Genomic DNA
Genomic DNA
Genomic DNA
Genomic DNA
Genomic DNA
Genomic DNA
Genomic DNA
Genomic DNA
Genomic DNA
Genomic DNA
Genomic DNA
Genomic DNA
Genomic DNA
   Genomic_DNA.
Genomic_DNA.
  127.5;
  Genomic_DNA
Genomic_DNA
  Genomic
   Genomic
  Genomic
   848
  Vertebrata;
ia; Pipoidea;
  .58;
   ₹
   ຸົດ
   DB 2;
   53;
   databases
   Length 1103;
  Indels
   CRC64;
   -----RNALFPEV----
   Buteleostomi;
; Pipidae;
  ----KNLMQT
  49;
   Gaps
  1038
   155
   213
   993
   109
   6
```

```
RESULT
Q5U301_
  5
   밁
  5
  밁
   8
   밁
  S
   SORRER RELIGIOS DE LA COMPTANTA DE LA COMPTANT
SAFEE BROSS
  Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

A Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Scheetz T.E.,

Brownstein M.J., Uddin T.B., Bonnaldo M.F., Casavant T.L., Scheetz T.E.,

A Stapleton M., Soders M.F., Carninci P., Prange C.,

A Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

A Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Bosak S.A., McZewan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

A Raha S.S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Pahey J., Helton E., Ketteman M., Madan A., Gadrigues S., Sanchez A.,

A Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

A Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

"Generation and initial analysis of more than 15,000 full-length human

"Generation and initial analysis of more than 15,000 full-length human
  Matches
   Query Match
Best Local
   LT 7
01_RAT
05U301_RAT
   01-FEB-2005 (TrEMBLrel. 29,
01-FEB-2005 (TrEMBLrel. 29,
01-FEB-2005 (TrEMBLrel. 29,
  TISSUE=Spleen;
MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
   TISSUE=Spleen;
MEDLINE=2234132; PubMed=12454917; DOI=10.1002/dvdy.10174;
Klein S.L., Strausberg R.L., Wagner L., Pontius J., Clifton S.W.,
                           Eukaryota; Metazoa;
   Rattus norvegicus (Rat)
  Name=Akap2_predicted
  A kinase (PRKA) anchor
   Q5U301;
   SEQUENCE
  EMBL; BC084662; AAH84662.1;
   Klein S., Gerhard D.S.;
Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases
   and mouse cDNA sequences.
  NUCLEOTIDE SEQUENCE.
   "Genetic and genomic tools initiative.";
  NUCLEOTIDE SEQUENCE
Mammalia; Eutheria; Euarchontoglires;
  rissum=spleen;
   NUCLEOTIDE SEQUENCE.
  initiative.
   749
   131
   697
  645
   809
   167
  71 ALRIQKSQSSDLLERERESVLRREQEVALERRNALFPEVFSPTPDENSDQNSRSSSQASG
  13
   Similarity
  PLSTK-SLSPTEQNCTEEHKQESYFSKYSQSAELR
  PLSTKQEASKPPRGCPQANRGVVRW-EYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAP-
  RRDRMD---
   QRKKEQWYAGINPSDGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
   RTVSYKTAPGKIEKIRNPSSPRGESFPIQPDLLLEBATGSQRPKNLMETLMDDFESHKTK
   ITGSYSVS----
   KLRSKKOKTLSMIEEEIRAAQEREQDLKKOREROSIOSOHSP-----SNKSAPVLPT
  225:384-391 (2002)
  848 AA;
  Acad. Sci. U.S.A. 99:16899-16903(2002).
   PRELIMINARY;
  Conservative
   94904 MW;
                           Chordata;
   10.6%;
  protein
   DATVLDAVRVNRRKSALALKWEAGIYANRDDD
  40;
   for Xenopus research: The NIH Xenopus
  Created)
Last sequing Last annument 2 (Pro
  <u>'</u>.
   Score 120.5;.
Pred. No. 1.4
Craniata; Vertebrata; Eut
oglires; Glires; Rodentia;
  D7FC3AF563828D8B CRC64;
  mRNA
  ESPFFSPIHL------HSNVAWTVEDPVDSAPPG
  Mismatches
  sequence update) annotation updat (Predicted).
  870
   ₿
  DB 2;
   update)
  83;
   ----STASILATQETEISVGPF
  Length
  Indels
                           Euteleostomi;
   full-length human
Sciurognathi;
   848;
  53;
   215
   846
  Gaps
   808
   748
   696
  70
  166
  œ
```

```
QSJTZ4 HUMAN
ID QSJTZ4 H
AC QSJTZ4-DT 10-MAY-2
DT 10-MAY-2
DT 13-SEP-2
DE A kinage
GN Name=AK9
OC Homo Bag
OC Mammalke
OC Mammalke
OC MOMO SAMMALE
RN [1]
RP NUCLEOTI
RA Submittee
RN [2]
  SON DER REPRESENTATION OF THE PROPERTY OF THE 
  8
   밁
   S
  밁
  S
  밁
  A Strausberg R.L., Peingold E.A., Grouse L.H., Derge J.G.,
A Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
A Altschul S.F., Zeeberg B., Butow K.H., Schaefer C.F., Bhat N.K.,
A Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
A Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaby S.J.,
Besak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
A Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
A Pahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
A Pahey J., Helton E., Ketteman M., Madan A., Kong M.C., Shevchenko Y., Bouffard G.G.,
A Pahey J., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
A Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
A Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
Tend moise Cnub. Gibbs B.J.M., Marra M.A.,
Tenned Toller G. Marra M.A.,
Ten
  Matches
  Query Match
Best Local
   Submitted [2]
  NIH MGC Project;
Submitted (NOV-2004) to the EMBL/GenBank/DDBJ databases.
EMBL; BC085790; AAH85790.1; -; mRNA.
Ensembl; ENSRNCG00000011504; Rattus norvegicus.
GO; GO:0016301; F:kinase activity; IEA.
  MEDLINE=22388257;
   NCBI_TaxID=10116;
  Muridae; Murinae;
   SEQUENCE
  TISSUE-Kidney
   10-MAY-2005 (TrEMBLrel. 30, Created)
10-MAY-2005 (TrEMBLrel. 30, Last sequence update)
10-MAY-2005 (TrEMBLrel. 31, Last annotation update)
13-SEP-2005 (TrEMBLrel. 31, Last annotation update)
A kinase (PRKA) anchor protein 2 (Fragment).
Name=AKAP2, ORPNames=RP11-470J20.3-007;
  NUCLEOTIDE SEQUENCE Phillimore B.;
   Q5JTZ4_HUMAN PRELIMINARY;
   NUCLEOTIDE SEQUENCE.
  NCBI_TaxID=9606;
   Mammalia, Eutheria;
  Eukaryota; Metazoa;
  CISSUE=Kidney;
  domo sapiens (Human)
  mouse cDNA sequences.";
c. Natl. Acad. Sci. U.S.
  825
   162
   768
   126
  715
   66 VAGAPALRIOKSOSSDILERERESVIRREQEVAEERRNALFFEVFSFTFDENSDONSRSS
   42;
  Similarity
   SAPPGORKKEOWYAGINPSDGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
   SQASGITGSYS----
  MVGPFKLRSRKQRTLSMIEEEIRAAQEREEELKRQR-----QVRQSTPSPRA-QNAPSL
  THKSKRRERMD-----
   PSR----TTCYKTAPGKIEKVKPPPSPTTEGPSLQPDLAPEEAAGAQRPKNLMQTLMEDYE
                                       (MAY-2005)
  SEQUENCE
   870
   Conservative
   ξ,
  PubMed=12477932; DOI=10.1073/pnas.242603899;
   Rattue
   95941 MW;
   Chordata;
  10.5%;
   Euarchontoglires;
                                    ő
                                    the EMBL/GenBank/DDBJ
   S.A.
   -----IHLHSNVAWTVEDPVD
  30;
  ----DSSVLEATRVNRRKSALALRWEAGIYANQEEE 867
   Score 118.5; I
Pred. No. 2.1;
30; Mismatches
  Craniata;
   99:16899-16903 (2002)
  516C22DA6D7A2DD2 CRC64;
  PRT;
   a; Vertebrata; Euteleostomi;
Primates; Catarrhini; Homin
  949
  ⋛
  DB 2;
   57;
   Catarrhini; Hominidae;
  Length
   Indels
  870;
   45;
   Gaps
  824
  161
  767
  125
   6
```

```
SO DR DR P
PRESENTATION OF THE PRESEN
   뭉
  S
   밁
  8
   문
  S
                 RC STRAIN-657BL/6J; TISSUE-Testis;

RC STRAIN-657BL/6J; TISSUE-Testis;

RX KAWAI J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,

RA KAWAI J., Shinagawa A., Shibata K., Yoshino M., Adachi J., Fukuda S.,

RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,

RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kasukawa T., Saito R.,

RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,

RA Fleischmann W., Gaasterland T., Mikaido I., Pesole G., Quackenbush J.,

RA Kuchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Kuchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner I., Washio T.,

RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,

RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,

RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,

RA Guetincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,

RA Hordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,

RA Sazaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,

RA Sazaki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,

RA Karoki W., Waltz C., Whittaker C., Wilming L.,

RA Karoki W., Waltz C., Whittaker C., Wilming L.,

RA Karoki W., Waltz C., Waltz C., Wilming L.,

RA Karoki W., Waltz C., Waltz C., Wilming L.,
   Query Match
Best Local S
Matches 42
   Ol-OCT-2003 (TrEMBLrel. 23, Last 01-OCT-2003 (TrEMBLrel. 25, Last Mus musculus adult male testis cl library, clone:4932411M01 product insert sequence.
  Kimberley A.;
Submitted (MAY-2005) to the EMBL/GenBank/DDBJ databases.
EMBL; AL1535598; CAI40818.1; -; Genomic DNA.
EMBL; AL158823; CAI39562.1; -; Genomic DNA.
EMBL; AL158823; CAI40818.1; JOINED; Genomic DNA.
EMBL; AL158823; CAI40818.1; JOINED; Genomic DNA.
EMBL; AL353598; CAI39562.1; JOINED; GENOMIC DNA.
   Q8C5W1 MOUSE PRELIMINARY;
   SEQUENCE
   NUCLEOTIDE SEQUENCE
   STRAIN=C57BL/6J; TISSUB-Testis; MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9; Carrinci P., Hayashizaki Y.; "High-efficiency full-length cDNA cloning.";
  Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia, Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
   NON TER
  Kinase.
  Mus musculus (Mouse).
  NUCLEOTIDE SEQUENCE
   NUCLEOTIDE SEQUENCE.
  NCBI_TaxID=10090
  Muridae; Murinae;
   MOUSE
   898
  156
  853
   795
   66 VAGAPALRLQKSQSSDLLERERESVLRREQEVAEER-----RNALFPEV----
   Enzymo1.
  42;
   Similarity
   WVGPFKLRSRKQRTLSMIEEEIRAAQEREEELKRQRQVLQSTQSPRTKNA--PSLPSRTC
   LMEDYETHKSKRERMD------
   VEDPVDSAPPGORKKEOWYAGINPSDGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
  YKTAPGKIEKVKPPPSPTTEGPSLQPDLAPEEAAG-----TQRP-----KNLMQT
  949
   10.4%;
nilarity 23.3%;
Conservative 3
  A.
   303:19-44(1999).
  Mus.
  104234
   ----FSPTPDENSDONSRSSSOASGITGSYSVSESPFFSPIHLHSNVAWT
   3, Last sequence update)
5, Last annotation update)
estis cDNA, RIKEN full-length
product:A kinase anchor prote
  M.
  34;
   Score 118;
Pred. No. 2
  Created)
  PRT;
  Mismatches
  4E6ACAFC2A6F2EBD
   :| |||| || ||:|:| |||: |||:|::
DSSVLEATRVNRRKSALALRWEAGIYANQEEE
  880
   2.6;
   BB
   <u>ب</u>
  46;
   Length 949;
  CRC64;
  Indels
  protein
  enriched
      Wilming
suki S.,
  58;
  K. -F.,
   Gaps
   H (4
   852
  109
  155
   946
  215
  897
```

```
Ś
  밁
   ঠ
   밁
  S
   Query Match
Best Local S
Matches 42
   A Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P., Fukuda S., Furuno M., Hanagaki T., Hara A., Hashizume W., A Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Hirozane T., A Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T., A Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T., A Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S., A Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M., A Nishi K., Nomura K., Aumazaki R., Ohno M., Ohsato N., Okazaki Y., A Nishi K., Nomura K., Aumazaki R., Ohno M., Ohsato N., Okazaki Y., A Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H., Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M. Tagawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T., Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.; EMBL; AKO77020; BAC36571.1; -, mRNA.
   STRAIN=C57BL/6J; TISSUE=Testis;

MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600;

Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,

Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,

Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M.,

Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,

Yamamoto R., Matsumoto H., Sasayuchi S., Kegami T., Kashiwagi K.,

Fujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,

Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;

"RIKEN integrated sequence analysis (RISA) system-384-format

sequencing pipeline with 384 multicapillary sequencer.";

Genome Res. 10:1757-1771(2000).
  runctional annotation of Nature 409:685-690(2001).
  MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100; Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., It Konno H., Okazaki Y., Muramatsu M., Sugahizaki Y.; Konno H., Okazaki Y., Muramatsu Gap-trapper-selected cDNAs to "Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genome Res. 10:1617-1630(2000).
   SEQUENCE
  NUCLEOTIDE SEQUENCE.
STRAIN=C57BL/6J; TISSUE=Testis;
  60,770 full-length cDNAs.";
Nature 420:563-573(2002).
   the RIKEN Genome Exploration Research Group Phase I & II "Analysis of the mouse transcriptome based on functional
  NUCLEOTIDE SEQUENCE
  NUCLEOTIDE SEQUENCE
  Hayashizaki Y.;
  GO:0051018; F:protein kinase A binding; IPI.
GO:0007015; F:actin filament organization; IDA.
GO:0008104; F:protein localization; IPI.
GO:0007178; P:transmembrane receptor protein se
   FANTOM Consortium
  783
   110
                                  155
  66
   Similarity
TLMEDYETHKSKRRERMD---
                                TVEDPVDSAPPGORKKEOWYAGINPSDGINSEVLEAIRVTRHKNAMAERWESRIYASEED
  CYKTAPGKIEKVKPPPSPTTEGPSLOPDLAPEEAAG-----TQRP-----KNLMQ
   MVGPFKLRSRKQRTLSMIEEEIRAAQEREEELKRQRQVRQSTPSPRAKNA--PSLPSRTT
  VAGAPALRIQKSQSSDLLERERESVLRREQEVAEER----
   880 AA;
  Conservative
   /6J; TISSUE=Testis;
   TISSUE=Testis;
   97137 MW;
   10.4%;
   --- FSPTPDENSDONSRSSSOASGITGSYSVSESPFFSPIHLHSNVAW
  of a
  full-length mouse
   Score 117.5;
Pred. No. 2.
   1CD1888BA492C55D CRC64;
  Mismatches
  receptor protein serine/threo.
-DSSVLEATRVNRRKSALALRWEAGIYANQEE
   .
5;
   DB
  46;
   2
  cDNA collection.";
   Length 880;
  Indels
  -----RNALFPEV----
  Carninci P.,
   annotation
   Team;
  59;
  Tagami
   Itoh
  genes.";
  Gaps
   ۳,
  :.
   s.
  3
   3

g
  IPI.
   782
                                  214
  827
   154
  109
  9
```

```
RESULT 11
QUULLS HUN
ID QUILL
AC QUULL
AC QUULL
DT 01-M2
DT 01-M3
DT 01-M3
DT 01-M3
DT 01-M3
DT 01-M3
DT 01-M3
DT 01-M4
DT 01-M3
   REAL SERVICE S
   Ś
   뮹
  Ş
   밁
   S
   밁
   Ś
  片
  5
  밁
   Matches
   Query Match
Best Local
  Q9ULL8 HUMAN PRELIMINARY;
Q9ULL8;
Q9ULL8;
01-MAY-2000 (TrEMBLrel. 13, C
01-MAY-2000 (TrEMBLrel. 13, L
01-MAR-2004 (TrEMBLrel. 26, L
KIAA1202 protein (Fragment).
  G2_HUMAN
Q9H4G2_HUMAN
Q9H4G2;
   PROSITE;
SEQUENCE
  -i- SIMILARITY: Contains 1 PDZ (DHR) EMBL; AL121865; CAC08472.2; -; Genom EMBL; AL359272; CA195315.1; -; Genom EMBL; AL359272; CAC08472.2; JOINED; EMBL; AL121865; CA195315.1; JOINED; EMBL; ENSG00000158352; Homo sapis
  Submitted (MAY-2005) to the EMBL/GenBank/DDBJ
-- SIMILARITY: Contains 1 PDZ (DHR) domain.
EMBL; AL121865; CAC08472.2; -: Genomic_DNA.
EMBL; AL359272; CA195315.1; -: Genomic_DNA.
  01-MAR-2001 (TrEMBLrel. 16, 01-MAR-2001 (TrEMBLrel. 16, 13-SEP-2005 (TrEMBLrel. 31,
  Homo sapiens (Human)
  InterPro; IPR001478; PDZ. Pfam; PF00595; PDZ; 1.
   GO; GO:0005515; F:protein binding; IBA
   Bird
  NUCLEOTIDE SEQUENCE
   NUCLEOTIDE SEQUENCE
   NCBI_TaxID=9606;
  Mammalia; Eutheria;
   Eukaryota; Metazoa;
   Name=RP11-119E20.1; ORFNames=RP11-119E20.1-001;
   Novel protein
   HUMAN
   1126
  1236
  1181
  1086
  166
  119
  215
   68
  œ
   SM00228; PDZ; 1.
  Similarity 53; Conserv
  M0022.;
; PS50106; FUL
1493 AA;
  U
  ETOSDLLGARKKAFPPPRPPPP-----NWEKYRL----FRAAQQQKQQQ-------
   Ħ
   GAPALRIOKSO-SSDLIERERESVIRREOEVAEERRNALFPEVFSP-----TPDENS 118
  ģ
   -----QQQKQQEEEEEEEEEEEEEEEEEEEEEEEEEEAEEEEELPPQYFSSETSGSCALNPEEVL 1180
  ESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVA
  YGIGGLWRTSGQEATESAKQEFQHFSPPSG
  EQPQPLSFGHLEGSRQGSQSVPAEQESFALHSSDFLPPIRGHLG-----SQPEQAQPPCY 1235
  (MAY-2005)
  215
   Conservative
   PRELIMINARY;
   ; PDZ; 1.
AA; 164857 MW;
  ----NSRSSQA-SGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPP-- 165
  GORKKE---OWYAGINPSDG 182
  Euarchontoglires; Primates; Catarrhini; Hominidae;
   Chordata; Craniata; Vertebrata; Euteleostomi;
   10.1%;
  ö
  the EMBL/GenBank/DDBJ
   20;
  Created)
Last sequence update)
Last annotation updat
  Created)
Last sequence update)
Last annotation updat
   Score 114.5;
Pred. No. 8.3;
  Mismatches
   40260DC12A24EAFF CRC64;
   Genomic_DNA
Genomic_DNA
  1493
   1502
   1265
  8
   В
   update)
   72;
   2;
   databases.
  databases
   Length
  Indels
   1493;
   65;
   Gaps
  1125
  67
  10,
```

Eukaryota; Metazoa; Name=KIAA1202; Homo sapiens (Human)

Chordata; Craniata; Vertebrata; Euteleostomi;

```
SO DE RESERVA DE RESER
ફ
  유
   Ś
  밁
  S
  용
  १
  밁
  Best Local S
Matches 51
   O9633;
O96836;
O96836;
10-MAY-2005 (Rel. 47, Last sequence update)
10-MAY-2005 (Rel. 48, Last sequence update)
13-SEP-2005 (Rel. 48, Last annotation update)
Hormone receptor 4 (DHR4).
NamesHr4; ORFNames=CG16902;
Drosophila melanogaster (Fruit fly).
Drosophila melanogaster (Fruit fly).
Sukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Ptesukaryota; Medopterygota; Diptera; Brachycera; Muscomol Ephydroidea; Drosophilade; Drosophila.
  -!- SIMILARITY: Contains 1 PDZ
EMBL; AB033028; BAA86516.1; -;
   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
   Pfam; PF00595; PDZ; 1.
SMART; SM00228; PDZ; 1.
   "Prediction of the coding The complete sequences of
   Ohara O.,
   Nagase T., Ishikawa
   MEDLINE=20039619;
  NCBI_TaxID=9606
   SEQUENCE
  PROSITE; PS50106; PDZ; 1.
   PubMeda15935763; DOI=10.1016/j.cell.2005.0 King-Jones K., Charles J.P., Lam G., Thumm "The ecdysone-Induced DHR4 orphan nuclear and maturation in Drosophila.";
   NUCLEOTIDE SEQUENCE [MRNA], SPECIFICITY.
  HR4 DROME
STRAIN=Oregon-R;
MEDLINE=20196011;
   NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC
   GO:0005515; F:protein erPro; IPR001478; PDZ.
  large proteins in vitro.
Res. 6:337-345(1999).
  1090
  _TaxID=7227;
  1191
   166
   120
  P31016; 1BE9
  121:773-784 (2005).
   8
  8
   51;
   Similarity
  ENSG00000158352;
  GAPALRLQKSQSSDLLERERESVLRREQEVABERRNALFPEVFSP-----TPDENSD
  ETQSDLLGARKKAFPPPRPPPP-----NWEKYRL----FRAAQQQKQQQQQQ-----
   essgkplstkqeaskpprgcpqanrgvvrweyfrlrplrfraddepqqaqvphvwgweva
  GIGGLWRTSGQEATESAKQEFQHFSPPSG
  QPQPLSFGHLEGSRQGSQSVPAEQESFALHSSDFLPPIRGHLG----SQFEQAQPPCYY 1245
  --QQQQKQQEEEEEEEEEEEEEEEEEEEEEEEEEEEEPEÇPQYFSSETSGSCALNPEEVLE
   Q-----NSRSSSQA-SGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPP---
   1502 AA;
   Conservative
  STANDARD;
   DOI=10.1016/j.cell.2005.03.030;
harles J.P., Lam G., Thummel C.S
  PubMed=10574462;
    PubMed=10731137;
   K.-I.,
  10.1%;
   165950 MW;
   Homo sapiens.
binding; IEA.
   sequences of 100 new cDNA
   Kikuno
   22;
  QWYAGINPSDG
   FUNCTION,
   Score 114;
Pred. No. 9
  mRNA.
  PRT;
   Mismatches
   DC050C9C69B78AD9 CRC64;
   R., Hirosawa M., Nomura
    DOI=10.1126/science.287.5461.2220;
   1518
   domain.
   SUBCELLULAR LOCATION,
   unidentified human clones from brain v
   9.1;
   1274
  182
  DB 2;
   ₽
  DNA]
   receptor
   78;
   from brain which co
  scta; Pterygota;
Muscomorpha;
  Ġ
  Length 1502;
  coordinates
  AND
   code
   growth
  Gaps
  TISSUE
  1190
  1132
   119
   67
  165
```

```
RA Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA George R.A., Lewis S.E., Kichards S., Ashburner M., Henderson S.N.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
RA Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Harlon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Harli J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
RA Ballew R.M., Basu A., Baxtendale J., Bayraktroglu L., Beasley E.M.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolhakov S.,
RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
RA Cherry J.M., Cawley S., Dahlke C., Davemport L.B., Davies P.,
RA Chery J.M., Cawley S., Dahlke C., Davemport L.B., Davies P.,
RA Dodson K., Doup L.B., Downes M., Dugan Rocha S., Dunkov B.C., Dunn P.,
RA Durbin K.J., Bvangelista C.C., Ferraz C., Ferriera S., Fleischmann W.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Harris N.L., Harvey D.A., Heiman T.J., Hernandez J.R., Houck J.,
RA Harris N.L., Harvey D.A., Heiman T.J., Hernandez J.R., Houck J.,
RA Harris M., Kalush F., Karpen G.H., Ke Z., Kemison J.A., Ketchum K.A.,
RA Jalali M., Kalush F., Karpen G.H., Ke Z., Kemison J.A., Ketchum K.A.,
RA Maishin D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Mount S.M., Moy M., Murphy B., Murphy L., Mazny D.M., Nelson D.,
RA Raiszolo M., Pittman G.S., Pan S., Pollard J., Pan S., Scheeler F., Shen H.,
RA Rainert K., Remington K.S., Sunders R.D.C., Scheeler F., Shen H.,
RA Rainert K., Remington K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Rainert K., Remington K.S., Sunders R.D.C., Scheeler F., Shen H.,
RA Rainert K., Remington K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Rainert K., Remington K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Rainert K., Remington K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Rainert S., Vonders R.D.C., Sc
  Barrell B.G., Ferraz C., Vidal S., Brun C., Demailles J., Cadieu Dreano S., Gloux S., Lelaure V., Mottier S., Galibert F., Borkova Minana B., Kafatos F.C., Louis C., Siden-Kiamos I., Bolshakov S., Papagiannakis G., Spanos L., Cox S., Madueno E., de Pablos B., Modolell J., Peter A., Schoettler P., Werner M., Mourkioti F., Beinert N., Dowe G., Schaefer U., Jaeckle H., Bucheton A., Callister D.M., Campbell L.A., Darlamitsou A., Henderson N.S., McMillan P.J., Salles C., Tait E.A., Valenti P., Saunders R.D.C.,
   Glover D.M.;
  Benos P.V.,
Barrell B.G.
  MEDIINE-22426069; PubMed=12537572;
Misra S., Crosby M.A., Mungall C.J., Malthews B.B., Campbell K.S.
Hradecky P., Huang Y., Kaminker J.S., Millburn G.H., Prochnik S.E.
Smith C.D., Tupy J.L., Whitfield E.J., Bayraktaroglu L., Berman B
Bettencourt B.R., Celniker S.E., de Groya.D.N.J., Drysdale R.A.,
Harris N.L., Richter J., Russo S., Schroya.D., Shu S.Q.,
Stapleton M., Yamada C., Ashburner M., Gelbart W.M., Rubin G.M.,
   MEDLINE=20196006;
   STRAIN-Berkeley
  Science
  "From sequence to
   Stapleton M., Yamada
   GENOME REANNOTATION
   Genome Biol. 3:RESEARCH0083.1-RESEARCH0083.22(2002)
   systematic review."
   "Annotation of the Drosophila melanogaster
  Lewis S.E.;
                              development. Plateriggered by the
  FUNCTION: Coordinates growth and maturation by mediati
responses to the attainment of critical weight during
  287:2220-2222 (2000)
  SEQUENCE [LARGE SCALE
  Gatt
  3.×.,
   Plays a central role
   PubMed=10731132; DOI=10.1126/science.287.5461.2185;
ker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
   chromosome: the tip
                                     steroid
  Ashburner M.,
hormone ecdysone at the both a repressor of the
  GENOMIC DNA].
  Murphy L., Harris D.,
   of the X chromosome of D.
   in the genetic cascades
  euchromatic
   mediating endocrine
   onset
early
  genome:
   Ketchum K.A.,
  larval
           ecdysone-
  B.D.,
   B.P.,
  а U.,
  H.O.,
```

```
Query Match
Best Local
   DNA BIND
ZN FING
ZN FING
COMPBIAS
COMPBIAS
COMPBIAS
COMPBIAS
COMPBIAS
COMPBIAS
   GO; GO:0005634; C:nucleus; IDA.
GO; GO:0004079; F:ligand-dependent nuclear receptor activity; IMP.
GO; GO:00040007; P:growth; IMP.
GO; GO:00040007; P:growth; IMP.
GO; GO:0030518; P:steroid hormone receptor signaling pathway; IMP.
InterPro; IPR001628; Hrmm rcpt_DNA_bd.
InterPro; IPR001636; Hrmm rcpt_Dla_bd.
InterPro; IPR000354; Involucrin_rpt.
InterPro; IPR000354; Involucrin_rpt.
InterPro; IPR000334; VilD_receptor.
Pfam; PP00104; Hormone_recep; 1.
Pfam; PP00104; Hormone_recep; 1.
Pfam; PP00105; zf-C4; 1.
   CONFLICT
  PROSITE; PS00031; NUCLEAR REC_DBD 1; 1.

PROSITE; PS51030; NUCLEAR REC_DBD 2; 1.

PROSITE; PS51030; NUCLEAR REC_DBD 2; 1.

DNA-binding; Metal-binding; Nuclear protein; Transcription;

Transcription regulation; Zinc; Zinc-finger.
  SEQUENCE
  PRINTS; PR00398; STRDHORMONER.
PRINTS; PR00367; STROIDFINGER.
PRINTS; PR00350; VITAMINDR.
SMART; SM00399; ZnF_C4; 1.
   Ensembl; CG16902; Drosophi
FlyBase; FBgn0023546; Hr4.
  nge
  1 1
1 1
   ÷
  - -
  This
  +
  CONFLICT
  8
   s Swiss-Prot entry is copyright. It is produced the ween the Swiss Institute of Bioinformatics and to European Bioinformatics Institute. There are no
   leave the food to form premature prepupae, resulting in abbreviated larval development that translates directly smaller and lighter animals.

SIMILARITY: Belongs to the nuclear hormone receptor fami
   competence factor.
SUBCELLULAR LOCATION: Nuclear.
TISSUE SPECIFICITY: During L2 and L3 stages, strong constitutive expression is seen in the ring gland. Lower expression is detection specific neurons of the central nervous system (CNS) (at
  SIMILARITY: Contains 1 nuclear receptor DNA-binding CAUTION: Ref.2 and Ref.3 sequences differ from that
  erroneous gene model prediction.
   protein level).
MISCELLANEOUS:
  induced
  Swiss-Prot
  687
 738
                                   5
4
  £19793;
   AL035245; CAA22836.1; ALT_SEQ; AE003422; AAF45702.3; ALT_SEQ;
   N
  long as its content is in no way modified and this statement
  Similarity
 GOSHGOHPOOOOOSPH--
  SPHPSSSSSSSQLSPQTPSQTPPRGTPTVIMGESCGVRTMVWGY
  SPRHLSESSGKPLSTKQEASKPPRGCPQANRG-----VVRWEYFRLRPLRFRAPDEP--
  CG16902; Drosophila melanogaster.
  918
921
957
94
135
239
460
1460
1440
1452
  regulatory genes and
   Conservative
  ₹
   144
213
1452
                                   QQAQVPHVWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNA
  Plies lacking Hr4 exhibit larvae that precociously to form premature prepupae, resulting in
  993
  9.6%;
  162655
   30;
  MW;
  NR C4-type 1.
NR C4-type 2.
Ala-rich.
  Gln-rich
  Gly-rich.
Arg-rich.
  Score 108.5;
Pred. No. 24
   Ser-rich.
  Nuclear receptor.
   ļ
   Mismatches
  an
   R (in Ref. 1).
R (in Ref. 1).
V (in Ref. 1).
KA (in Ref. 1).
  DDBDFEBA416D17AA
--HQPQQQQQQQQQQQQQQQQQQQQQSLGQQQHCL
  inducer of the ftz-fl midprepupal
   Genomic_DNA
  Genomic_DNA.
   DB 1;
   8O;
  receptor family.
   and the
   Length 1518;
   Indels
  CRC64;
  through a collaboration -
   restrictions
  domain.
shown due
   73;
  ---EPPPPSA
   detected
   Gaps
  NR.1
  ç
  엺
  18 not
                                 104
  737
  53
```

\$ \$ \$ \$ \$

```
S
   8
  Ş
   문
   S
   δ
   문
  S
   RESULT 13
Q56AW0_DROME
  맑
  Query Match
Best Local S
Matches 48
   Pfam; PF00104; Hormone recep; 1.

Pfam; PF00104; Involucin; 1.

Pfam; PF00105; zf-C4; 1.

Pfam; PF00105; zf-C4; 1.

Pfam; PF00105; zf-C4; 1.

PRINTS; PR00398; STRDHPRNONER.

PRINTS; PR00047; STROIDFINGER.

PRINTS; PR00047; STROIDFINGER.

SMART; SM00430; VITAMINDR.

SMART; SM00430; HOLI; 1.

SMART; SM00399; ZnF C4; 1.

SMART; SM00399; ZnF C4; 1.

PROSITE; PS00031; NUCLEAR REC_DBD_1; 1.

PROSITE; PS51030;  -!- SUBCELLULAR LOCATION: Nuclear (By similarity).
-!- SIMILARITY: Belongs to the nuclear hormone receptor family.
EMBL, AY971884; AAX73355.1; -; mRNA.
GO; GO:0005634; C:nucleus; IEA.
GO; GO:0046872; F:metal ion binding; IEA.
GO; GO:0003707; F:steroid hormone receptor activity; IEA.
GO; GO:0003700; F:transcription factor activity; IEA.
GO; GO:0006355; P:regulation of transcription, DNA-dependent; IEA.
   PubMed=15935763; DOI=10.1016/j.cell.2005.0 King-Jones K., Charles J.P., Lam G., Thumm "The ecdysone-induced DHR4 orphan nuclear
  InterPro; IPR001628; Hrmn_rcpt_DNA_bd.
InterPro; IPR000536; Hrmn_rcpt_1ig_bd.
InterPro; IPR000354; Involucrin_rpt.
InterPro; IPR001723; Stdhrmn_receptor.
InterPro; IPR000324; VitD_receptor.
  Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
  Q56AWO DROME
  GO; GO:0006350; P:transcription;
  Cell 121:773-784(2005)
   and maturation in Drosophila.",
   Hormone receptor 4.
Name=Hr4; ORFNames=CG16902;
   10-MAY-2005 (TrEMBLrel.
   Q56AWO
   NUCLEOTIDE SEQUENCE
   NCBI_TaxID=7227;
   10-MAY-2005
   10-MAY-2005
       105
   687
  847
  140
   105
   N
   48;
   Similarity
  LFPEVFSPTPDENS---
   GQSHGQHPQQQQQSPH
   SPHPSSSSSSQLSPQTPSQTPPRGTPTVIMGESCGVRTMVWGY-----EPPPPSA
  SPRHLSESSGKPLSTKQEASKPPRGCPQANRG-----VVRWEYFRLRPLRFRAPDEP--
  HPFRTPHALNMERLWAGD--YSQLPPGQLQALNLSAQQQQW--GSSNSTGL
   SPFFSPIHLHSNVAWTVEDPVDSAPPGQ----
   SSPSAGSLTPSSSSGGGSVSGGGVGGPLTPSSVAPQNNEEAAQLLLSLGQTRIQDMRSRP
   (TrEMBLrel.
   Conservative
   (TrEMBLrel.
   PRELIMINARY;
  DOI=10.1016/j.cell.2005.03.030;
harles J.P., Lam G., Thummel C.S
   QQAQVPHVWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNA 104
   9.6%;
  30,
30,
   30;
  Score 108.5;
Pred. No. 24;
30; Mismatches
   Last sequence up
   Created)
   IEA.
   ---HQPQQQQQQQQQQQQQQQQQQQQQQSLGQQQHCL 786
  1518
-----DONSRSSSOASGITGSYSVSE-----
   ---RKKEOWYAGINPSDGI 183
   receptor
  update)
   B
  DB 2;
   update)
   80;
   s.
  Length
   Indels
   coordinates growth
  1518;
   73;
   Gaps
   737
   53
  846
   139
   9
```

밁

787

SSPSAGSLTPSSSSGGGSVSGGGVGGPLTPSSVAPQNNEEAAQLLLSLGQTRIQDMRSRP 846

```
8
   밁
  RA Bayul T., Bitishteyn B., Bloom T., Blye J., Beguslavsky L.,
RA Bayul T., Bitishteyn B., Bloom T., Blye J., Beguslavsky L.,
RA Calvo S., Camarata J., Campo K., Chang J., Cheshatsang Y., Citroen M.,
RA Collymore A., Considing T., Cook A., Cooke P., Corum B., Cuomo C.,
RA Collymore A., Considing T., Cook A., Cooke P., Corum B., Cuomo C.,
RA Dorjee K., Doris L., Duffey N., Dugge S., Dooley K., Dorje P.,
RA Dorjee K., Doris L., Duffey N., Dugge S., Dooley K., Dorje P.,
RA Fitzgerald M., Foley K., Gage D., Galagan J., Gearin G., Gnerre S.,
RA Fitzgerald M., Foley K., Gage D., Galagan J., Gearin G., Gnerre S.,
RA Hagopian D., Hagos B., Hall J., Hatcher B., Haller A., Higgins H.,
RA Hagopian D., Hagos B., Hall J., Hatcher B., Haller A., Higgins H.,
RA Hagopian D., Hagos B., Hall J., Hatcher B., Haller A., Higgins H.,
RA Kalls C., Kieu A., Kisner P., Kodira C., Kulbokas E., Labutti K.,
RA Lindblad-toh K., Liu X., Lokyitsang T., Lokyitsang Y., Lucien O.,
RA Lama D., Landers T., Leger J., Levine S., Lewis D., Lewis T.,
RA Manning J., Marabella R., Maru K., Matchews C., Mauceli E.,
RA Mccarthy M., Mcdonough S., Mcghee T., Mclien T., Mauceli E.,
RA Mccarthy M., Mcdonough S., Mcghee T., Mikelsen T., Munga V., Moru K.,
RA Morbu N., O'donnell P., Okoawo O., O'leary S., Omotosho B.,
RA Norbu N., O'donnell P., Okoawo O., O'leary S., Omotosho B.,
RA Rutman M., Schupbach R., Seaman C., Settipalli S., Sharpe T.,
RA Rutman M., Schupbach R., Seaman C., Settipalli S., Sharpe T.,
RA Rutman W., Stance C., Stone S., Stubbs M., Talamas J., Tchuinga P.,
RA Rutman W., Stance C., Stone S., Stubbs M., Talamas J., Tchuinga P.,
RA Asteson S., Tiesono N., Vallee D., Vassiliev H.,
RA Mangid T., Whittaker C., Stone S., Stubbs M., Talamas J., Tchuinga P.,
RA Mangid T., Whittaker C., Stone S., Stubbs M., Talamas J., Tchuinga P.,
RA Mangid T., Whittaker C., Get G., Wang S., Wangchuk T.,
RA Mangid T., Whittaker C., Get G., Wang S., Wangchuk T.,
RA Mangid T., Wang S., Yeager S., Yee E., Young G., Zainoun J., Zembeck L.,
RA Yang S., Yang X., Yasger S
  Birren B., Nusbaum C., Abebe A., Abouelleil A., Ait-zahra M., Allen N., Allen T., An P., Anderso Arachchi H., Armbruster J., Bachantsang P., Bal
  Eukaryota; Fungi; Basidiomycota; Ustilaginomycetes;
Ustilaginomycetidae; Ustilaginales; Ustilaginaceae;
NCBI_TaxID-237631;
   Q4 PBW3
   Q4PBW3_USTMA PRELIMINARY;
  Zimmer A., Zody M., Lancet J., "The genome sequence of Ustilago maydis.";

Submitted (FEB-2004) to the EMBL/GenBank/DDBJ databases
-I- CAUTION: The sequence shown here is derived from an
-I- CAUTION: The sequence shown here shotgun (WGS) entry
   ORFNames=UM02400.
  Ustilago maydis 521
  EMBL; AACPO1000083; EAK83438.1;
InterPro; IPR005565; BTP.
InterPro; IPR007124; Hist_TAF.
  13-SEP-2005
   USTMA
  preliminary data.
SUBCELLULAR LOCATION: Nuclear
  140
   HPFRTPHALNMERLWAGD--YSQLPPGQLQALNLSAQQQQW--GSSNSTGL
   SPFFSPIHLHSNVAWTVEDPVDSAPPGQ-----RKKEQWYAGINPSDGI 183
   (TrEMBLrel.
  (TrEMBLrel.
  (TrEMBLrel.
  Hypothetical protein; Nuclear protein
  llen T., An P., Anderson M., Anderson S., Bachantsang P., Baldwin J., Barry A., Bloom T., Blye J., Boguslavskiy L.,
   Created)
Last sequence update)
Last annotation update)
   PRT;
  (By similarity)
   Genomic_DNA
   793
   ₿
  Adekoya
  Ustilago.
   which
  Citroen M.,
   893
  Hafez N.,
  · s.,
   ۲.,
```

```
Ś
  RESULT 15
QS5TP8_CRYNE
  Ś
   뭉
   밁
  S
   S
 뭉
                      S
   밁
  á
  밁
   S
  밁
   8
  S
  밁
   Query Match
Best Local S
   Matches
   Best Local
   Query Match
  Matches
   SEQUENCE
   Q55TP8 CRYNE PRELIMINARY;
Q55TP8;
13-SEP-2005 (TrEMBLrel. 3
  Hypothetical protein. SEQUENCE 1066 AA;
   "Cryptococcus neoformans serotype D sequencing Submitted (JUL-2004) to the EMBL/GenBank/DDBJ-I- CAUTION: The sequence shown here is deriven.
   Eukaryota; Fungi; Basidiomycota; Hymenomycetes; Heterobasidiomycetes;
Tremellomycetidae; Tremellales; Tremellaceae; Filobasidiella.
   Hypothetical protein. ORFNames=CNBD4050;
  Fung E., Hyman R.W.
Wickes B.L., Fu J.,
   Cryptococcus neoformans var.
   13-SEP-2005
13-SEP-2005
   EMBL;
  STRAIN=B-3501A;
   NCBI_TaxID=283643;
  EMBL/GenBank/DDBJ whole genome shotgun (WGS)
  669
 403
                        183
   356
  248 LQNAASRPSSFNVLHSPSVGSPVSPTSPHGESKPS----RLAGLNSQRLKFEPSGRGAEA
  188
   72 LRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQASG- 130
  AAEY01000021;
  36;
  2 SPRHLSESSGKPLS-----TKQEASKPPRGC-----PQANRGVVRWEYFR------
   Similarity
  Similarity
  Hyman R.W.,
  RMRSESTNSDLADA
  ---SDGINSEVLEA
   IADSYA---
  ITGSYSVSESPFFSPIHLHSNVA----
  LOWREKEAEILPEEDKEELORROOELQLOLOAAL-----ASENSGGGKDSAVLSSGL
QSADTPE 409
                        INSEVLE 189
   PLSGAFGQPTFSWSNQPSFSFLPLPLGS---
  QASGITG--SYSVSESPFFS--PIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDG
   ERESVLRREQEVAEERRNAL------FPEVFSPT------PDENSDQNSRSSS
  ----LRPLRFR----
  SPRRFSNTSSRPPSLLLARPPSNALSPPRSAAGPSSPPAQTKKKRHSHTRSNSISLPNIK 247
   793
   SEQUENCE.
   (TrEMBLrel. 31, (TrEMBLrel. 31,
   8
   ----EESRRRALEKLTGSESRSTSPFVESPVAEISLPDLDDEDSSSVASSNR
   84916 MW;
   EAL21029.1; -; Genomic_DNA.
   , Rowley D., Bruno D., Miranda M., Fukushima Davis R.W.;
   9.3%;
   -SRIR-NGNITMVHTWDWTPRDPYDAMLPGKKVKTPGSRGVGPVALEK 772
   114328 MW;
  24.3%;
   9.3%;
  31,
  190
  26;
   Last sequence update)
Last annotation update)
  Created)
  Pred. No. 18;
6; Mismatches
  Pred.
   Score 105;
  neoformans B-3501A.
  Score 105.5;
   8627A3C45F71ACE2 CRC64;
   PRT;
   -APDEPQQAQVPHVWGWEVAGAPALRLQKSQSSDLLER
   Mismatches
   B006016D4771A5AF CRC64;
  ŏ.
  sequencing
   is derived from
  WIVEDPVDSAPPGORKKEOWYAGINP-----
   -SSPSPLSASP
  DB
  DB 2;
   2;
  41;
   78;
  databases
  Length 1066;
   entry
  Length
  Indels
  Indels
   an
   which
  84;
  31;
  FSGASPADG
   18
  Gaps
  Ξ
  720
   179
   182
  355
   126
   303
  85
   41
  402
  12
```

Search completed: March Job time: 84.1137 secs

W

2006, 13:26:17

```
Run on:
   Regult
No.
   Title:
Perfect score:
   Minimum DB seq length: 0
Maximum DB seq length: 200000000
  Scoring table:
   OM protein -
   Database
  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
   Total number of hits satisfying chosen parameters:
   Sequence:
  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
   146
101.5
93.5
   Score
protein search, using sw model
   572060 seqs, 82675679 residues
  BLOSUM62
Gapop 10.0 , Gapext 0.5
   US-10-646-873-47
1132
1 MSPRHLSESSGKPL
   March 3, 2006, 13:35:46; Search time 28.8338 Seconds (without alignments) 616.473 Million cell updates/sec
   Match
  Issued_Patents AA:*

1: /cgn2_6/ptodata/1/iaa/5_COMB.pep:*

2: /cgn2_6/ptodata/1/iaa/6_COMB.pep:*

3: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*

4: /cgn2_6/ptodata/1/iaa/RE_COMB.pep:*

5: /cgn2_6/ptodata/1/iaa/RE_COMB.pep:*
  100.0
   MSPRHLSESSGKPLSTKQEA......HKNAMAERWESRIYASEEDD 215
  GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
   Length DB
1048
699
876
371
249
1158
342
1151
489
933
1172
1182
1435
1435
  US-09-050-516-45
US-10-278-547-45
US-10-278-547-46
US-10-278-547-44
US-10-278-547-44
US-09-050-516-44
US-09-050-516-49
US-09-050-516-49
US-09-050-516-49
US-09-050-518-19
US-09-294-5318-2
US-09-284-7968-15373
US-09-060-482-2
US-09-252-9918-27223
            US-09-428-711A-14

US-08-124-674-2

US-09-248-796A-20513

US-09-949-016-8593

US-09-041-886-21

US-08-568-459A-4

US-08-487-8268-4
   US-09-050-516-47

US-10-278-547-47

US-09-050-516-42

US-10-278-547-42

US-09-050-516-43

US-10-278-547-43
  SUMMARIES
                                       Sequence
Sequence
Sequence
Sequence
  Description
  Sequence
Sequence
  Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
  Sequence
Sequence
  Sequence
   Sequence
                            Sequence
  Sequence
  Sequence
   Sequence
3/21, Appli
15373, A
15373, A
27223, Appli
27223, Appli
27223, Appli
20513, Ap
14, Appli
21, Appli
4, Appli
4, Appli
```

| ı. |                     | 44                   | 43                | 42                | 41                | 40               | 39               | 38               | 37               | 36               | 35                | 34               | 33                | 32               | 31               | 30               | 29               | 28              |
|----|---------------------|----------------------|-------------------|-------------------|-------------------|------------------|------------------|------------------|------------------|------------------|-------------------|------------------|-------------------|------------------|------------------|------------------|------------------|-----------------|
| 0  | 9 6                 | B                    | 82.5              | 82.5              | 82.5              | 82.5             | 82.5             | 82.5             | 82.5             | 82.5             | 82.5              | 82.5             | 82.5              | 82.5             | 82.5             | 82.5             | 82.5             | 83              |
|    | ۱ .<br>د د          | 7.2                  | 7.3               | 7.3               | 7.3               | 7.3              | 7.3              | 7.3              | 7.3              | 7.3              | 7.3               | 7.3              | 7.3               | 7.3              | 7.3              | 7.3              | 7.3              | 7.3             |
| 2  | 1 0                 | 281                  | 1346              | 1346              | 489               | 489              | 489              | 489              | 489              | 489              | 489               | 489              | 489               | 489              | 489              | 489              | 489              | 1435            |
|    | ا د                 | N                    | N                 | ۳                 | ۲                 | _                | _                | -                | μ                | μ.               | ۳                 | ۳                | ب                 | Н                | ш                | -                | ۳                | Ν               |
|    | IIC-10-104-047-2022 | US-09-252-991A-17976 | US-08-978-277A-2  | US-08-635-121-2   | US-09-062-890-38  | US-09-062-890-36 | US-09-062-890-34 | US-09-062-890-32 | US-09-062-890-30 | US-09-062-890-28 | US-09-062-890-26  | US-09-062-890-22 | US-09-062-890-10  | US-09-020-991-22 | US-09-020-991-10 | US-08-589-893-22 | US-08-589-893-10 | US-10-153-273-4 |
|    | Semience 2022. Ap   | Sequence 17976, A    | Sequence 2, Appli | Sequence 2, Appli | Sequence 38, Appl | •                | •                | •                | •                | •                | Sequence 26, Appl | •                | Sequence 10, Appl | •                | •                |                  | •                | <br>            |

## ALIGNMENTS

| LENCE 47, Application US/09050516  Bent No. 6627414  WERAL INFORMATION:  APPLICANT: BILLLING-MEDEL, PATRICIA  APPLICANT: COHENTS, TRACEY L.  APPLICANT: GOLDITTS, TRACEY L.  APPLICANT: GOLDITTS, TRACEY L.  APPLICANT: GOLDITTS, TRACEY L.  APPLICANT: GOLDON, JULIAN  APPLICANT: GORDON, JULIAN  APPLICANT: KLASS, MICHAEL R.  APPLICANT: KLASS, MICHAEL R.  APPLICANT: KRATOCHVIL, JOHN C.  APPLICANT: ROBERTS-RAPP, LISA  APPLICANT: REAGENTS AND METHODS USEFUL  TITLE OF INVENTION: FOR DETECTING DISEASES OF THE  TITLE OF INVENTION: FRACT  NUMBER OF SEQUENCES: 49  CONTRY: Abbott Park  STATE: 100 Abbott Laboratories  STREET: 100 Abbott DATA  ZIP: 60064-3500  COMPUTER READABLE FORM:  COUNTRY: USA  ZIP: 60064-3500  COMPUTER READABLE FORM:  COUNTRY: OSS  SOFTMARE: FastSEQ for Windows Version 2.0  COMPUTER: 100 ADTA:  APPLICATION NUMBER: US/09/050,516  FILING DATE: 31-MAR-1997  ATTORNEY/AGENT INFORMATION:  TRACETORNEY/AGENT INFORMAT | FILING DATE: CLASSIFICATION: PRIOR APPLICATION NOW FILING DATE: ATTORNEY/AGENT IN NAMB: Becker, REGISTRATION NOW REFERENCE/DOCKE TELECOMMUNICATION TELEPAN: 847/9 INFORMATION FOR SEC | TITLE OF INVENTION NUMBER OF SEQUENCE CORRESPONDENCE ADJ ADDRESSEE: Abbo STREET: 100 Abb CITY: Abbott R CITY: Abbott R STATE: IL COUNTRY: USA ZIP: 60064-350 COMPUTER READABLE MEDIUM TYPE: IBM COMPUTER: IBM OPERATING SYSTE: SOPERATING SYSTE: SOPERATING SYSTE: CURRENT APPLICATION NUMBER TO THE STATE OF THE STREET APPLICATION NUMBER COMPUTER TAPPLICATION NUMBER COURSENT APPLICATION NUMBER COURS | WASSULTI<br>US-09-050-516-47<br>Sequence 47, A<br>Patent No. 662<br>GENERAL INFOR<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT<br>APPLICANT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 08/82<br>1997<br>TON:<br>L.<br>35,4<br>35,4<br>IER:<br>IMATIO<br>729<br>13                                                                                                            | RESS: 49 RESS: 49 RESS: 49 Sott Park Road out Park Road out Park Road ark out Park Road ark sout Park Road ark out Park Road ark sout Park Road ark ark sout Park sikette compatible dr DOS 3EQ for Windows Version 2. N DATA: ND DATA: SER: US/09/050,516                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | pplication US/09050516 7414 7414 7414 MATION: MAITION: BILLING-MEDEL, PATRICIA COHEN, MAURICE COLPITS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN GORDON, JULIAN GRANADOS, EDWARD N. HAYDEN, MARK HODGES, STEVEN HODGES, STEVEN HAYDEN, MARK ROBGES, STEVEN ROBGETS-RAPP, LISA ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROBGETS-ROB |

SEQUENCE CHARACTERISTICS:

```
Ś
   US-10-278-547-47
  Ś
  밁
  밁
  δ
   문
   US-09-050-516-47
   Sequence 47, Application Patent No. 6660834
GENERAL INFORMATION:
   Query Match 100.
Best Local Similarity 100.
Matches 215; Conservative
   TOPOLOGY: 11 MOLECULE TYPE:
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: PastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
   LENGTH: 215 amino acids
TYPE: amino acid
STRANDEDNESS: single
   ATTORNEY/AGENT INFORMATION:
   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: <UNknown>
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
  CORRESPONDENCE ADDRESS:
ADDOLT Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
  KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   APPLICANT: BILLING-MEDEL, PATRICIA
  NUMBER OF SEQUENCES: 49
  181
  181
  121
  121 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
  61
  13
   1 MSPRHLSESSGKFLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  VWGWEVAGAPALRLQKSQSSDLLERBRESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
  VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 120
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  COUNTRY: USA
ZIP: 60064-3500
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
   Application US/10278547
   linear
   HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
   GRANADOS,
   COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
   No. 6627414e
   COHEN, MAURICE
   100.0%;
  TRACT
   EDWARD N.
   <u>.</u>
   Score 1132; DB 2;
Pred. No. 8.9e-113;
   Mismatches
  215
   Indels
   Length
   215;
   0;
  120
   60
   60
   0
```

```
TOPOLOGY: linear
;
MOLECULE TYPE: NO. 6660834e
;
SEQUENCE DESCRIPTION: SEQ ID NO:
US-10-278-547-47
   RESULT 3
US-09-050-516-42
   밁
   Ś
  밁
  ঠ
   밁
   Patent No.
   Sequence 42, Application US/09050516
   Query Match 100.0%; Score 1132; DB 2; Best Local Similarity 100.0%; Pred. No. 8.9e-113; Matches 215; Conservative 0; Mismatches 0;
  GENERAL INFORMATION:
APPLICANT: BILLIN
APPLICANT: COHEN,
   APPLICANT: HAYDEN, MARK
APPLICANT: HODGES, STEVEN C.
APPLICANT: KLASS, MICHAEL R.
APPLICANT: KRATCCHVIL, JON D.
APPLICANT: ROBERTS-RAPP, LISA
APPLICANT: RUSSELL, JOHN C.
APPLICANT: STROUPE, STEPHEN D.
APPLICANT: STROUPE, STEPHEN D.
TITLE OF INVENTION: REAGENTS AN
TITLE OF INVENTION: TRACT
  TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
  COUNTRY: USA
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
  APPLICANT: APPLICANT:
  APPLICANT:
  NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
  STREET: 100 Abbott
CITY: Abbott Park
   TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
   121
  121 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
   181 DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
  61 VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 120
   61 VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 120
  1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH 60
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
   LENGTH: 215 amino acids
TYPE: amino acid
STRANDEDNESS: single
  TELEFAX: 847/938-2623
   COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
  GRANADOS,
   BILLING-MEDEL,
   COHEN, MAURICE
   REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF THE GASTROINTESTINAL TRACT
  EDWARD N.
   PATRICIA
   47:
   215
  Length 215;
  Indels
  0,
  Gaps
  60
```

```
문
   श
  밁
  S
  ġ
   밁
   ঽ
   ફ
   TOPOLOGY: linear; MOLECULE TYPE: No. 6627414e
   US-10-278-547-42
  Sequence 42, Application Patent No. 6660834
GENERAL INFORMATION:
   Matches
  Query Match
Best Local Similarity
   INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
   NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 600
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
  PRIOR APPLICATION DATA:
APPLICATION NUMBER:
   FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
  TYPE: amino acid
STRANDEDNESS: sir
   TELEFAX: 847/938-2623
   ENGTH:
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOPTWARE: PAGESEQ FOR WINDOWS Version
CURRENT APPLICATION DATA:
  CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
STATE: IL
   TITLE OF
  NUMBER OF SEQUENCES: 49
  181 DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
   585
   121 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAMTVEDPVDSAPPGQRKKEQMYAGINPS 180
  525 VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   645
  465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   215;
   61
   1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   VWGWEVAGAPALRIOKSOSSDILERERESVIRREQEVAEERRNALFPEVFSPTPDENSDQ 120
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  COUNTRY: USA
  Application US/10278547
   679 amino acids
  Conservative
   HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KKATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
   BILLING-MEDEL, COHEN, MAURICE
  GRANADOS,
  single
   100.0%; Score 1132; DB 2; 100.0%; Pred. No. 5e-112; O. Mismatches 0;
  08/828,855
   TRACT
   EDWARD N.
  42:
  6065.US.P1
  PATRICIA
   679
  Length
  Indels
   679;
  <u>..</u>
   584
  524
   60
   644
   á
   Ś
  맑
  Ś
   밁
  밁
```

```
US-10-278-547-42
  RESULT 5
US-09-050-516-43
  Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 215; Conservative 0
  Sequence 43, App...
No. 6627414
  GENERAL INFORMATION:
APPLICANT: BILLING
APPLICANT: COHEN,
APPLICANT: COLPITI
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 42:
SEQUENCE CHARACTERISTICS:
  APPLICANT:
APPLICANT:
APPLICANT:
  APPLICANT:
  APPLICANT:
  TITLE OF INVENTION:
TITLE OF INVENTION:
  APPLICANT
   APPLICANT:
                                     CORRESPONDENCE ADDRESS:
   NUMBER OF SEQUENCES:
   APPLICANT:
   APPLICATION NUMBER: 08/828,855
ETILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US
TELECHONNE: 847/935-1729
TELEPAX: 847/938-2623
                  ADDRESSEE:
   CLASSIFICATION: «Unknown»
PRIOR APPLICATION DATA:
   TOPOLOGY: linear MOLECULE TYPE: No. 6660834e SEQUENCE DESCRIPTION: SEQ ID NO: 42:
   181 DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
  465
  121 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  61 VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH 60
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
  APPLICATION NUMBER: US/09/050,516 FILING DATE: <Unknown>
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679
   LENGTH: 679 amino acids
TYPE: amino acid
STRANDEDNESS: single
   APPLICATION NUMBER: US/10/278,547 FILING DATE: 23-Oct-2002
   Application US/09050516
100 Abbott Park Road
  HAYDEN, MARK
HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
VENTION: REAGENTS AND METHODS USEFUL
VENTION: FOR DETECTING DISEASES OF THE GASTROINTESTINAL
VENTION: TRACT
VENTION: TRACT
  GORDON, JULIAN
GRANADOS, EDWARD N.
   COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
   BILLING-MEDEL, PATRICIA COHEN, MAURICE
                    Abbott Laboratories
   49
  0;
   Score 1132; DB 2
Pred. No. 5e-112;
  Mismatches
   6065.US.P1
   DB 2;
   Length 679;
  Indels
  <u>.</u>,
  Gaps
  524
```

584 120

COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette

60064-3500

USA

STATE: I

```
밁
   US-10-278-547-43
   US-09-050-516-43
  INFORMATION FOR SEQ ID NO: 4
SEQUENCE CHARACTERISTICS:
LENGTH: 36 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: NO. 6627414
   Sequence 43, Application US/10278547 Patent No. 6660834 GENERAL INFORMATION:
  Matches
  Query Match
   APPLICATION NUMBER: 08/828,85
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
  FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
   COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
  Local Similarity 100.
mes 36; Conservative
   APPLICATION NUMBER: US/09/050,516
   TELEFAX: 847/938-2623
  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
   TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
 CURRENT
   NUMBER OF SEQUENCES: 49
  APPLICANT:
  1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
NT APPLICATION DATA:
   COMPUTER: IBM Compatible
  ZIP: 60064-3500
  CITY: Abbott Park
  COUNTRY: USA
  linear
E: No. 6627414e
  BILLING-MEDEL, PATRICIA
   COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
   HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
  GRANADOS,
   COHEN, MAURICE
   HAYDEN, MARK
   16.7%;
   JULIAN
   08/828,855
  TRACT
  EDWARD N.
   43:
  0
   Score 189; DB 2; ; Pred. No. 3.8e-13;
   6065.US.P1
  Mismatches
  Length 36;
  Indels
  0
  Gaps
```

```
밁
  US-09-050-516-45
   RESULT 7
   US-10-278-547-43
   Sequence 45,
   Matches
   Patent No. 6627414
GENERAL INFORMATION:
   Query Match
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 43:
SEQUENCE CHARACTERISTICS:
     SOFTWARE: FASTER: DOS
SOFTWARE: FASTERQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE:
  APPLICANT: KRATOCHVIL, JON D.
APPLICANT: ROBERTS-RAPP, LISA
APPLICANT: RUSSELL, JOHN C.
APPLICANT: STROUPE, STEPHEN D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
TITLE OF INVENTION: FOR DETECTING DISEASES OF THE GASTROINTESTINAL
TITLE OF INVENTION: TRACT
   APPLICANT:
   APPLICANT:
APPLICANT:
  ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
   APPLICANT:
   APPLICANT:
   APPLICANT:
  APPLICANT:
   Local Similarity 100.
les 36; Conservative
CLASSIFICATION:
   COUNTRY:
  APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
  TOPOLOGY: linear
MOLECULE TYPE: No. 6660834e
SEQUENCE DESCRIPTION: SEQ ID NO: 43:
   PRIOR APPLICATION DATA:
   1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
  APPLICATION NUMBER: US/09/050,516 FILING DATE: <Unknown>
   APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
   STRANDEDNESS: single
   TYPE: amino acid
  LENGTH: 36 amino acids
  TELEPHONE: 847/935-1729
   H
   Application US/09050516
  TELEFAX: 847/938-2623
  HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
ROBERTS RAPP, LISA
   USA
   COLPITTS, TRACEY L
FRIEDMAN, PAULA N.
GORDON, JULIAN
   COHEN, MAURICE
  GRANADOS,
  BILLING-MEDEL, PATRICIA
   16.7%; but
100.0%; Pr
   MARK
  EDWARD N.
  TRACEY L.
   Score 189; DB 2; ; Pred. No. 3.8e-13; 0; Mismatches 0;
   Length 36;
   Indels
   ٥.
   Gaps
```

```
ঠ
   밁
  JS-10-278-547-45
   Query Match
Best Local Similarity
   Matches
   MOLECULE TYPE: No. 6627414e
   Patent No. 66601
GENERAL INFOR
   Sequence 45,
   SEQUENCE CHARACTERISTICS:
   NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
   FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
  PRIOR APPLICATION DATA:
  COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette
COMPUTER: IEM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION UNMERR: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: «Unknown»
  LENGTH: 35 amino acids
TYPE: amino acid
STRANDEDNESS: single
  TELEFAX: 847/938-2623
   TOPOLOGY:
  APPLICATION NUMBER:
   HAYDEN, MARK
HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVII, JON D.
KRATOCHVIII, JON D.
KRAT
   CORRESPONDENCE ADDRESS:
ADDRESSE: Abbott Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
   NUMBER OF SEQUENCES: 49
  ATTORNEY/AGENT INFORMATION:
  PRIOR
  APPLICANT: BILLING-MEDEL, PATRICIA
  104 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 138
   1 ALPPEVESPTPDENSDONSRSSSQASGITGSYSVS 35
  APPLICATION NUMBER: US/09/050,516
FILING DATE: <Unknown>
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
  COUNTRY: USA
ZIP: 60064-3500
   Application US/10278547
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
  APPLICATION DATA
   Conservative
   linear
  GRANADOS,
   PRIEDMAN, PAULA N.
   COHEN, MAURICE
COLPITTS, TRACEY L.
   15.5%;
  JULIAN
  08/828,855
  EDWARD N.
  45:
   0
   Score 175; DB 2; Pred. No. 1.1e-11;
  6065.US.P1
   Mismatches
  Length 35;
   Indels
   0
   0
```

```
밁
   S
   US-09-050-516-46
   RESULT 9
   Matches
   Query Match
Best Local Similarity
   Patent No.
  Sequence 46,
  APPLICATION NUMBER: US/09
FILLING DATE:
CLASSIFICATION:
PRIOR APPLICATION NUMBER: 08/82
APPLICATION NUMBER: 08/82
FILING DATE: 31-MAR-1997
   COUNTRY: USA
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 45:
  ATTORNEY/AGENT INFORMATION:
NAME: Becker Cherry T
   SOFTWARE: FastSEQ for Windows Version 2.0 CURRENT APPLICATION DATA:
                 NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION
TELEPHONE: 847/935-1729
   APPLICANT:
   APPLICANT:
  CORRESPONDENCE ADDRESS:
  NUMBER OF SEQUENCES:
  TITLE OF
  APPLICANT
  APPLICANT:
   PPLICANT:
  PPLICANT:
  PPLICANT:
   PPLICANT
   PPLICANT:
  COMPUTER: IBM Con
OPERATING SYSTEM:
SOPTWARE: FastSE(
   STATE:
  STREET:
  ADDRESSEE:
TELEFAX: 847/938-2623
   TOPOLOGY: linear MOLECULE TYPE: No. 6660834e SEQUENCE DESCRIPTION: SEQ ID NO:
   TELECOMMUNICATION INFORMATION: TELEPHONE: 847/935-1729
  SEQUENCE CHARACTERISTICS:
   104 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 138
   35;
  INFORMATION:
  Abbott Park
  ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 35
   Ħ
  INVENTION:
   INVENTION:
  INVENTION:
  TYPE: amino acid
  TELEFAX: 847/938-2623
   STRANDEDNESS: single
   ENGTH: 35 amino acids
  Application US/09050516
   COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
GRANADOS, EDWARD N.
   100 Abbott Park Road
   ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
VENTION: REAGENTS AND METHODS USEFUL
VENTION: FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   Conservative
  HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
  BILLING-MEDEL, PATRICIA
  IBM Compatible
  Abbott Laboratories
  Diskette
   MARK
  15.5%; Score 175; DB 2; 100.0%; Pred. No. 1.1e-11;
  Sod
  TRACT
  49
   08/828,855
  US/09/050,516
   35,441
   0
   6065.US.P1
  Mismatches
  45
  Length 35;
  Indels
  0;
   Gaps
```

NFORMATION FOR SEQ ID NO:

```
ş
   밁
   US-09-050-516-46
   RESULT 10
US-10-278-547-46
   Sequence 46, Applicati Patent No. 6660834 GENERAL INFORMATION:
   Best Local Similarity 97.0 Matches 32; Conservative
   Query Match
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 46:
SEQUENCE CHARACTERISTICS:
   MOLECULE TYPE:
  SEQUENCE CHARACTERISTICS:
LENGTH: 33 amino acids
   STRANDEDNESS: single
   APPLICATION NUMBER: US/09/050,516
FILING DATE: «Unknown»
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
  COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette

COMPUTER: IBM Compatible

OPERATING SYSTEM: DOS

SOPTWARE: FastSEQ for Windows Version 2.0

CURRENT APPLICATION DATA:
   NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 660
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
  CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
TOPOLOGY: linear MOLECULE TYPE: No. 6660834e SEQUENCE DESCRIPTION: SEQ ID NO: 46:
   PRIOR APPLICATION DATA:
  NUMBER OF SEQUENCES:
  TITLE OF
   APPLICANT: BILLING-MEDEL, PATRICIA
COHEN, MAURICE
   157 EDPVDSAPPGQRKKEQWYAGINPSDGINSEVLE 189
   1 EDSVDSAPPGORKKEOWYAGINPSDGINSEVLE 33
  amino acid
   LENGTH: 33 amino acids
TYPE: amino acid
STRANDEDNESS: single
   APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
  ZIP: 60064-3500
  CITY: Abbott Park
   Application US/10278547
   TELEFAX: 847/938-2623
  HODGES, STEVEN C.

KLASS, MICHAEL R.

KRATOCHVIL, JON D.

INVENTION: REAGENTS AND METHODS USEFUL

FOR DETECTING DISBASES OF THE GASTROINTESTINAL
  GORDON, JUGRANADOS,
  COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
   No. 6627414e
  HAYDEN, MARK
  USA
   15.1%;
97.0%;
  EDWARD N.
   0; Mismatches
   Score 171; DB 2;
Pred. No. 2.8e-11;
   6065.US.P1
   ۲,
   Length 33;
   Indels
   0;
   Gaps
   0
```

```
片
   Ş
   US-10-278-547-46
  ; TOPOLOGY: linear; MOLECULE TYPE: No. 6627414e
US-09-050-516-44
   US-09-050-516-44
   RESULT 11
  Query Match
Best Local Similarity
Matches 32; Conserv
Query Match 12.9%; Score 146; DB 2; 1
Best Local Similarity 100.0%; Pred. No. 1.2e-08;
Matches 31; Conservative 0; Mismatches 0;
   Sequence 44, Application US/09050516
  Patent No.
  COUNTRY:
CONSTRY
ZIP: 60064-3500
COMPUTER READABLE FORM:
COMPUTER: Diskette
COMPUTER: IBM COMPATIBLE
COMPUTER: IBM COMPATIBLE
   APPLICANT: ROBERTS-RAPP, LISA
APPLICANT: RUSSELL, JOHN C.
APPLICANT: STROUPE, STEPHEN D.
TITLE OF INVENTION: REAGENTS AND MI
TITLE OF INVENTION: FOR DETECTING I
TITLE OF INVENTION: TRACT
NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSE: ADDRESS:
   PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/828,85
PILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065
TELECOMMUNICATION INFORMATION:
TELECHONE: 847/935-1729
  GENERAL INFORMATION:
  TELEX:
INFORMATION FOR SEQ ID NO:
   SEQUENCE CHARACTERISTICS:
LENGTH: 31 amino acids
TYPE: amino acid
   COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
  APPLICANT:
APPLICANT:
APPLICANT:
   APPLICANT:
APPLICANT:
APPLICANT:
   APPLICANT:
   APPLICANT:
  APPLICANT:
  APPLICANT:
   FILING DATE:
CLASSIFICATION:
   STREET: 100 Abbott Park Road CITY: Abbott Park
   STRANDEDNESS:
   TELEFAX: 847/938-2623
   157 EDPVDSAPPGQRKKEQWYAGINPSDGINSEVLE 189
   1 EDSVDSAPPGORKKEOWYAGINPSDGINSEVLE 33
  Ħ
  COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
   HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
  Conservative
  GRANADOS, EDWARD N.
  BILLING-MEDEL, PATRICIA
   single
  MARK
   STEPHEN D.
REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  15.1%; Score 171; DB 2;
97.0%; Pred. No. 2.8e-11;
  08/828,855
  44:
  6065.US.P1
  0
  Mismatches
                                       Length 31;
   Length 33;
  Indels
  0
  Gaps
  0
```

Indels

0

ঠ

73

RLOKSOSSDILERERESVIRREQEVAEERRN 103

```
RESULT 12
US-10-278-547-44
   밁
  TOPOLOGY: 11near

HOLECULE TYPE: NO. 6660834e
SEQUENCE DESCRIPTION: SEQ ID NO: 44:
US-10-278-547-44
밁
                              श
  Query Match
Best Local Similarity
  Sequence
   Matches
  GENERAL INFORMATION:
   INFORMATION
  OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
  NMATION FOR SEQ ID NO: 44:
SEQUENCE CHARACTERISTICS:
   REFERENCE/DOCKET NUMBER: TELECOMMUNICATION INFORMATION:
  ATTORNEY/AGENT INFORMATION:
   PRIOR APPLICATION DATA:
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   NUMBER OF SEQUENCES:
  TITLE
  APPLICANT: BILLING-MEDEL, PATRICIA COHEN, MAURICE
  44,
                                 73
   31;
   RLOKSOSSDLLERERESVLRREQEVAEERRN 31
                              RIOKSOSSDILERERESVIRREQEVAEERRN 103
   LENGTH: 31 amino acids
TYPE: amino acid
STRANDEDNESS: single
   APPLICATION NUMBER: US/09/050,516
FILING DATE: «Unknown»
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
 RLOKSOSSDLIERERESVIRREGEVAEERRN 31
   NAME: Becker, Cheryl L. REGISTRATION NUMBER: 35,441
  STREET:
   TELEFAX: 847/938-2623
  COMPUTER: IBM Compatible
   COUNTRY: USA
  ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
  Q
  Application US/10278547
  TELEPHONE: 847/935-1729
  ELEX: <Unknown>
  KRATOCIVIL, JON D.

KRATOCHIL, JON D.
   Conservative
  60064-3500
   Abbott Park
  COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
   GRANADOS,
  MARK MARK
  12.9%; 5c.
100.0%; Pr/
0;
  MICHABL R.
   STEVEN C.
   EDWARD N.
  Score 146; DB 2;
Pred. No. 1.2e-08;
   Mismatches
   6065.US.P1
   0
  2.0
   Length 31;
   Indels
   0
   Gaps
   0
```

RESULT 13

```
밁
   ફ
  밁
   S
  밁
   S
   묽
  S
  US-09-921-099A-11
                                  밁
   S
  밁
   Ś
   US-09-457-040B-18
   RESULT 14
  US-09-921-099A-11
  US-09-457-040B-18
  Best Loc
Matches
  Query Match
Best Local Similarity
   SOFTWARE: PatentIn version 3.0 SEQ ID NO 11
   Sequence 11, Application US/09921099A
   Sequence 18, Application US/09457040B Patent No. 6387641 GENERAL INFORMATION:
  Matches
  GENERAL INFORMATION:
   Query Match
   SEQ ID NO 18
   CURRENT APPLICATION NUMBER: US/09/921,099A CURRENT FILING DATE: 2001-08-01
  TITLE OF INVENTION: Mammalian DNA Binding Membrane-Associated Protein-encoding Gene a FILE REFERENCE: 00-617-A
   APPLICANT: Hefeneider, Steven APPLICANT: Merkins, Louise
   CURRENT APPLICATION NUMBER: US/09/457,040B
CURRENT FILING DATE: 1999-12-08
   APPLICANT: Vertex Pharmaceuticals Incorporated APPLICANT: Bellon, Steve
   LENGTH: 10
TYPE: PRT
  NUMBER OF SEQ ID NOS: 21
   APPLICANT:
  NUMBER OF SEQ ID NOS: 4
SOFTWARE: PatentIn vers
  FILE REFERENCE: VPI/98-14
  LENGTH: 699
TYPE: PRT
ORGANISM: EMENI - Aspergillus Nidulans
  ORGANISM: Caenorhabditis elegans
  PPLICANT: Bellon, Steve
ITLE OF INVENTION: Crystallized P38 Complexes
  Local
   ŏ.
  572 LPGGPVVMIPQQQMVPPPQSMTPVGGPMGPMGPMTPSI--PVQVPPNTMWTATSPTGSVI 629
   114
  526 PQPMPMLIGYDMPGAPMM-----QATEVLTADGQMVNGTPQRVVIMQ-
  478
  351 WEVKARLEIDROVONELDKLRKRFECEVODRVAQEVEKORRNANYREDASLRSSGHSSOM 410
   630 YPAASPPGOPPHTIWIQSI----GVFKRKSNFLKIVR 662
  163 ----APPGORKKEOWYAGINPSDGI---NSEVLEAIR 192
162
                                    411 SSSNSEDSDFPSSTDISQLSLESPTNKAAKLPKKESRTPFTRSKTVVDSPMDIQMAEPSP
   122 SRSSSQASGITGSYSVSESPFFSPIH-----LHSNVAWT-----VEDPVD-----
   55 QAQVPHVWGWEVAGAPALRIQKSQSSDLLERERESYLRREQEVAEERRNALFPEVFSPT- 113
   64 WEVAGAPALRIQKSQSSDILERERESVI.--RREQEVAEERRNALFPEVFSPTPDENSDQN 121
   3 PRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLR--PLRFR-----APDEPQ 54
  49;
   1048
  45
  Similarity
  PatentIn version 3.0
  PNRMGYSSDAPPFIPSHQQQPP---PQ-----FFNSQHLPQRFRGGRQRGAPPPP 525
   Merkins, Louise
Bennett, Robert
Seiss, Donald
  ilarity 22.6%;
Conservative
--SAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRHKNAMAERWESR-----IYA 210
  8.3%; Score 93.5; DB
larity 24.3%; Pred. No. 0.53;
Conservative 19; Mismatches
   -----PDENSDQNSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDS-- 162
  9.0%; Score 101.5; Di
22.6%; Pred. No. 0.14;
  26;
  Mismatches
   B
   DB 2;
  83;
  68;
   2;
  ·Indels
   Length 699;
  Indels
   Length 1048;
  53;
  59;
  ----SPTH 571
  Gaps
  Gaps
  470
   161
  11;
```

```
PRIOR APPLICATION NUMBER: 60/082,513
PRIOR FILLING DATE: 1998-04-21
NUMBER OF SEQ ID NOS: 35
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 2
LENGTH: 876
TYPE: PRT
ORGANISM: Homo sapiens
US-09-294-531B-2
  Sequence 2, Application US/09294531B
Patent No. 6372889
GENERAL INFORMATION:
APPLICANT: Sheppard, Paul O.
APPLICANT: Conklin, Darrell C.
APPLICANT: Farrah, Theresa M.
APPLICANT: Farrah, Tark F.
APPLICANT: Grossmann, Angelika
TITILE OF INVENTION: SOLUBLE PROTEIN ZTWPO-1
FILE REFERENCE: 97-67
CURRENT APPLICATION NUMBER: US/09/294,531B
CURRENT APPLICATION TOMBER: US/09/294,531B
Search completed: March 3, 2006, 13:38:55 Job time : 30.0005 secs
  ş
   음 성
  먕
   Ş
   밁
  ર્
  RESULT 15
US-09-294-531B-2
   밁
   ş
  맑
  Query Match 8.0%; Score 90; DB 2; Length 876; Best Local Similarity 24.0%; Pred. No. 1.8; Matches 49; Conservative 38; Mismatches 89; Indels 28; Gaps
  471 ISIASLSLSPRRTSATYSG--
   511 DDEDD 515
  193 -VTRHKNAMAERWESRIYASEEDD 215
   211 SEEDD 215
  784 DVDPHQFPAVHRWKSAVLCYSPSD 807
   136 SVSESPFFSPIHLHSNVAWTVEDPVD-SAPPGQRKKEQWYAGINPSDGINSEVLEAIR-- 192
   625 EAAEP--GGPHSSRNGLCHPLNHSRTLAGKRPKAPHGEEAHLPPVSDLTVE-FDKLNLQN 681
  19 EASKPPRGCPQANRGVVRWEYFRLRPLRPRAPDEP--QQAQVPHVWGWEVAGAPALRLQK 76
  -KNIFAEGERKRPKFEPTLAYS 510
```

Run

9

March

OM protein

•

protein search, using sw model

GenCore version 5.1.7 Copyright (c) 1993 - 2006 Biocceleration Ltd.

```
Pred. No. 18 the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
  3, 2006, 14:09:14; Search time 94.4412 Seconds (without alignments) 951.209 Million cell updates/sec
  Sequence 42, 1
Sequence 42, 1
Sequence 42, 1
Sequence 4761
47, Appl
47, Appl
42, Appl
42, Appl
42, Appl
4761, Ap
33676, A
43, Appl
43, Appl
45, Appl
45, Appl
46, Appl
46, Appl
46, Appl
46, Appl
47, Appl
48, Appl
48, Appl
49, Appl
41, Appl
41, Appl
42, Appl
43, Appl
44, Appl
46, Appl
47, Appl
47, Appl
48, Appl
748, Appl
748, App
   US-09-050-516-47
  Sequence 47, Appl
Patent No. US2001
GENERAL INFORMAT
   FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/828
APPLICATION NUMBER: 1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,44
REFERENCE/DOCKET NUMBER: 6
   APPLICANT: GRANADOS, APPLICANT: HAYDEN, M APPLICANT: HODGES, S APPLICANT: KRATOCHVI APPLICANT: ROBERTS-R APPLICANT: ROBERTS-R APPLICANT: RUSSELL, APPLICANT: STROUPES, TITLE OF INVENTION:
    INFORMATION FOR SEQ ID NO:
   OPERATING SYSTEM: DOS
SOPTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
   COUNTRY: USA
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
   APPLICANT:
   NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
   APPLICANT:
  APPLICANT:
                               TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEFAX: 847/938-2623
   COMPUTER: IBM COMPONENTING SYSTEM:
SOPTWARE: FASTSEQ
   FITLE OF INVENTION:
   APPLICANT:
  STREET: 100 .--- CITY: Abbott Park
  APPLICATION NUMBER: US/09/050,516
   114.5
114.5
   114
  127
127
127
127
  101
   INFORMATION
   Ħ
  Application US/09050516
   COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
   HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
VENTION: REAGENTS AND METHODS USEFUL
VENTION: FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  11.3
   10
10
   GRANADOS,
  BILLING-MEDEL,
  IBM Compatible
  0010904A1
  Diskette
  1103
1335
1337
1337
948
1092
324
1454
1453
1520
686
686
869
   TRACT
  EDWARD N
  08/828,855
   35,441
  US-10-719-993-747
US-10-094-749-2942
US-10-094-749-2942
US-10-450-763-36719
US-10-408-765A-1328
US-10-408-765A-1328
US-10-467-555-14
US-10-447-555-167398
US-11-047-963-167398
US-11-047-963-167398
US-11-047-963-167398
US-11-047-963-204823
US-10-437-963-204823
US-10-437-963-204823
US-10-437-963-204823
US-10-437-963-204823
US-10-437-963-204823
US-10-437-963-204823
   PATRICIA
   US-10-631-467-691
US-10-719-993-742
US-10-719-993-743
   US-10-437-963-152820
   6065.US.P1
  ALIGNMENTS
  Sequence
Sequence
Sequence
Sequence
   Sequence
Sequence
Sequence
Sequence
   Sequence
Sequence
  Sequence
  Sequence
  Sequence
  Sequence
   Sequence
  791, App
743, App
747, App
747, App
747, App
744, App
744, App
36719, A
1328, Ap
1328, Ap
14, Appl
167398,
167398,
1768, App
2768, Appl
204823,
```

Regult No.

Score

Query Match

Length

멂

Description

500 8

US-10-646-873-42 US-10-106-698-4761 US-10-029-386-33676 US-09-050-516-43

-10-029-386-33676

Sequence Sequence

US-09-050-516-47 US-10-278-547-47 US-10-646-873-47 US-09-050-516-49 US-10-278-547-42 US-10-646-873-42

Sequence Sequence Sequence

146 127.5 127.5 127.5 127.5 127.5 127.5 127.5

115.55 115.55 115.55 115.15 115.15 115.15 115.33 115.33 115.33

US-10-278-547-44 US-10-646-873-44 US-10-087-192-1320 US-10-408-765A-2018 US-10-719-993-748 US-10-719-993-749

Sequence Sequence Sequence

Sequence Sequence

US-09-050-516-46
US-10-278-547-46
US-10-646-873-46
US-09-050-516-44

Sequence Sequence

Sequence

Sequence

US-10-278-547-45 US-10-646-873-45 US-10-278-547-43 US-10-646-873-43

Sequence Sequence Sequence

and is derived by analysis of the total

score greater than or equal

Database :

Published Applications AA Main:\*

1: /cgn2\_6/ptodata/1/pubpaa/US07\_PUBCOMB.pep:\*

2: /cgn2\_6/ptodata/1/pubpaa/US08\_PUBCOMB.pep:\*

3: /cgn2\_6/ptodata/1/pubpaa/US09\_PUBCOMB.pep:\*

4: /cgn2\_6/ptodata/1/pubpaa/US10A\_PUBCOMB.pep:\*

5: /cgn2\_6/ptodata/1/pubpaa/US11B\_PUBCOMB.pep:\*

6: /cgn2\_6/ptodata/1/pubpaa/US11\_PUBCOMB.pep:\*

Post-processing: Minimum Match 10

Listing first 45 summaries

100%

Minimum DB Maximum DB

seq length: 0 seq length: 2000000000

Total number of hits satisfying chosen parameters:

1867569 seqs, 417829326 residues

Scoring table: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5

Perfect score:

US-10-646-873-47 1132

1 MSPRHLSESSGKPLSTKQEA.....HKNAMAERWESRIYASBEDD

SEQUENCE CHARACTERISTICS

amino acid

amino acids

```
S-10-278-

/S-10-278-

/S-10-278-

/S-10-278-

Sequence 47, Are

S
  S
  밁
   S
   밁
  8
  밁
  5
  US-09-050-516-47
   US-10-278-547-47
   Matches 215;
   Query Match
  MOLECULE TYPE:
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASECSQ for Windows Version 2.0
CURRENT APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION LOWER: US/09/050,516
APPLICATION NUMBER: US/09/050,516
FILING DATE: 31-MAR-1997
APPLICATEON NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
   Local Similarity
  STRANDEDNESS:
  HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATCCHVIL, JON D.
KR
  NUMBER OF SEQUENCES:
   CORRESPONDENCE ADDRESS:
  181
  181
   121
   121 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
   19
  61 VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTFDENSDQ 120
   1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  DGINSEVLEAIRVTRHKNAMABRWESRIYASEEDD 215
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
   VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
  COUNTRY: USA
   Application US/10278547
   Conservative
  BILLING-MEDEL,
   GORDON, JULIAN GRANADOS, EDWARD N.
   COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
  No. US20010010904A1e
  single
   100.0%;
   0
   Score 1132; DB Pred. No. 6e-94;
  PATRICIA
   Mismatches
   DB 3;
   0;
   Length 215;
   Indels
   0,
   120
   180
  60
   60
   0
```

```
TOPOLOGY: linear ;

MOLECULE TYPE: NO. US20030082619A1e ;
SEQUENCE DESCRIPTION: SEQ ID NO: 47: US-10-278-547-47
   문
   δ
  문
   δ
   吊
  S
   밁
   Ś
   RESULT 3
US-10-646-873-47
  Sequence 47, Application US/10646873 Publication No. US20040043406A1 GENERAL INFORMATION:
  Best Local Similarity Matches 215; Conserv
   Query Match
  TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 47:
  COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/646,873
FILING DATE: 22-Aug-2003
CLASSIFICATION: Unknown>
  KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEFAX: 847/938-2623
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: 30-MAR-1998
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   CORRESPONDENCE ADDRESS:
  NUMBER OF SEQUENCES: 49
  APPLICANT: BILLING-MEDEL, PATRICIA
  SEQUENCE CHARACTERISTICS:
   181
   181 DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
  121
   121 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
   61
  61 VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 120
   1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRPRAPDEPQQAQVPH 60
   VWGWEVAGAPALRIQKSQSSDLIERERESVIRREQEVAEERRNAIFPEVFSPTPDENSDQ 120
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
   TYPE: amino acids
  ZIP: 60064-3500
  COUNTRY: USA
   STRANDEDNESS: single
  Conservative
   HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
  GRANADOS, EDWARD N.
   COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
  COHEN, MAURICE
  100.0%;
   JULIAN
  TRACT
  0;
  Score 1132;
Pred. No. 6
  Mismatches
  6e-94;
   DB 4;
   215
  <u>.</u>
  Indels
   Length 215;
  0,
  Gaps
```

60

```
TOPOLOGY: linear

MOLECULE TYPE: No. US20040043406Ale
SEQUENCE DESCRIPTION: SEQ ID NO: 47:
US-10-646-873-47
   ફ
  ફ
  밁
  US-09-050-516-42
   Matches 215;
   Query Match
Best Local Similarity
   Sequence 42,
  GENERAL INFORMATION:
  TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
   APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
  APPLICANT:
   APPLICANT:
APPLICANT:
APPLICANT:
  ent No.
           COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
  TITLE OF INVENTION:
  APPLICANT
  NUMBER OF SEQUENCES:
  PPLICANT:
   PPLICANT:
   COUNTRY:
  CITY: Abbott Park
   ATTORNEY/AGENT INFORMATI
   TELECOMMUNICATION INFORMATION:
  181
  181
  121
  121
  5
  5
   1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  2, Application US/09050516
US20010010904A1
  60064-3500
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
  VWGWEVAGAPALRIOKSOSSDILERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 120
  VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 120
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
   LENGTH: 215 amino acids
TYPE: amino acid
TYPE: amino acid
STRANDEDNESS: single
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
   TELEPHONE:
   APPLICATION NUMBER: 08/828,855
  ENGTH:
   TELEFAX: 847/938-2623
   Conservative
  USA
   RUSSELL, JOHN C.
   KRATOCHVIL, JON D. ROBERTS-RAPP, LISP
   COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
  COHEN, MAURICE
  GRANADOS,
  BILLING-MEDEL, PATRICIA
   STROUPE, STEPHEN D.
IBM Compatible
   S, STEVEN C.
  100.0%;
   847/935-1729
  MARK
  REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF THE TRACT
  49
  EDWARD N.
   0;
  Score 1132;
Pred. No. 6
   Mismatches
   6065.US.P1
   6e-94;
  DB 4;
   0;
  THE GASTROINTESTINAL
  Length 215;
   Indels
   <u>,</u>
   Gaps
   180
   60
   Ś
   δ
  Ş
   뭉
   밁
   片
   RESULT 5
US-10-278-547-42
   S
   Sequence 42, Ap
Publication No.
```

GENERAL

Application US/10278547

US20030082619A1

APPLICANT:

BILLING-MEDEL, PATRICIA COHEN, MAURICE

COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN GRANADOS, EDWARD N.

NUMBER OF SEQUENCES: 49 CORRESPONDENCE ADDRESS:

KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL

FOR DETECTING DISEASES OF THE GASTROINTESTINAL

HAYDEN, MARK HODGES, STEVEN C. KLASS, MICHAEL R.

ADDRESSEE: Abbott Laboratories STREET: 100 Abbott Park Road

STATE: IL STREET:

ZIP: 60064-3500 COUNTRY: USA CITY: Abbott Park

```
US-09-050-516-42
  Query Match
Best Local Similarity
   Matches 215; Conservative
   INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 679 amino acid
  NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
   APPLICATION NUMBER: 08/8:
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
   MOLECULE TYPE: No. US20010010904Ale
  PRIOR APPLICATION DATA:
   CURRENT APPLICATION DATA:
  TOPOLOGY: linear
   TELEFAX: 847/938-2623
   CLASSIFICATION:
  FILING DATE:
  APPLICATION NUMBER:
  SOFTWARE: FastSEQ for Windows Version
   OPERATING SYSTEM:
  585
   465
181
   61 VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH 60
  amino acida
DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH 524
                                       NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
  100.0%;
   08/828,855
   US/09/050,516
   <u>.</u>
  6065.US.P1
  Score 1132; DB 3; Pred. No. 2.7e-93;
   Mismatches
   DB 3; Length 679;
   Indels
   0;
   Gaps
   120
  644
  180
   584
```

COMPUTER READABLE FORM:

```
TOPOLOGY: linear in MOLECULE TYPE: NO. US20030082619Ale SEQUENCE DESCRIPTION: SEQ ID NO: 42: US-10-278-547-42
  US-10-646-873-42
Sequence 42, Application US/10646873
Publication No. US20040043406A1
GENERAL INFORMATION:
   S
   밁
   8
  밁
   S
   밁
   S
  Query Match
Best Local Similarity
   Matches
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 42:
SEQUENCE CHARACTERISTICS:
  APPLICATION NUMBER: US/09/050,516
FILING DATE: «Unknown»
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
   REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
  CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
  SOFTWARE: FastSEQ fo
CURRENT APPLICATION DATA:
  TITLE OF
    CORRESPONDENCE ADDRESS:
                         NUMBER OF SEQUENCES: 49
   APPLICANT: BILLING-MEDEL,
   585
   645
   181 DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
  121 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
   525 VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   215;
   61
   1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 120
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679
  LENGTH: 679 amino acids
TYPE: amino acid
STRANDEDNESS: single
   NAME: Becker, Cheryl L. REGISTRATION NUMBER: 35,441
  APPLICATION NUMBER: US/10/278,547 FILING DATE: 23-Oct-2002
   OPERATING SYSTEM: DOS
  MEDIUM TYPE: Diskette
   TELEFAX: 847/938-2623
  100.0%; Score 1132; ilarity 100.0%; Pred. No. 2 Conservative 0; Mismatches
  INVENTION: REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
   COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN GRANADOS, EDWARD N.
   COHEN, MAURICE
  IBM Compatible
   TRACT
   for Windows Version 2.0
   PATRICIA
   Mismatches
  2; DB 4;
2.7e-93;
   Length 679;
   Indels
   <u>,,</u>
   584
   524
   644
  60
   0
   Ś
  밁
   ş
  밁
   Ś
  US-10-106-698-4761
  밁
   Sequence 4761, Application US/10106698 Publication No. US20030109690A1 GENERAL INFORMATION:
APPLICANT: Ruben et al.

TITLE OF INVENTION: Colon and Colon Cancer Associated Polynucleotides and Polypeptide FILE REFERENCE: PA005P1
CURRENT APPLICATION NUMBER: US/10/106,698
CURRENT FILING DATE: 2002-03-27
PRIOR APPLICATION NUMBER: PA00/26524
PRIOR PELICATION NUMBER: PA00/26524
PRIOR PILING DATE: 2000-09-28
PRIOR APPLICATION NUMBER: US 60/157,137
PRIOR FILING DATE: 1999-09-29
```

```
US-10-646-873-42
  Best Local Similarity Matches 215; Conserv
   Query Match
  TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 42:
SEQUENCE CHARACTERISTICS:
   APPLICATION NUMBER: US/09/050,516
FILING DATE: 30-MAR-1998
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT_INFORMATION:
  COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/646,873
FILING DATE: 22-Aug-2003
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
   TOPOLOGY: linear MOLECULE TYPE: No. US20040043406Ale SEQUENCE DESCRIPTION: SEQ ID NO: 42:
  REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEFAX: 847/938-2623
  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                               181 DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
  121
645 DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679
  585 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   525 VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH 524
   61 VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 120
  1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH 60
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
   ADDRESSEE: Abbott Laboratories STREET: 100 Abbott Park Road CITY: Abbott Park
   TYPE: amino acid
  NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
   STRANDEDNESS: single
   LENGTH: 679 amino acids
  Conservative
   60064-3500
   100.0%; Score 1132; DB 4; 100.0%; Pred. No. 2.7e-93; tive 0; Mismatches 0;
   6065.US.P1
  Indels
   Length 679;
  0
  Gaps
   644
   584
```

```
LOCATION: (55)
OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids NAME/KEY: MISC FEATURE
LOCATION: (116)
OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids US-10-106-698-4761
   Ş
  밁
   8
  밁
RESULT 9
US-09-050-516-43
  밁
   5
   RESULT 8
US-10-029-386-33676
   SEQ ID NO 4761
   NUMBER OF SEQ ID NOS: 34288
SOFTWARE: Annomax Sequence Listing Engine vers. 1.1
SEQ ID NO 33676
   Sequence 33676, Application US/10029386 Publication No. US20030194704A1
  Query Match
Best Local Similarity
   Query Match
Best Local (
   GENERAL INFORMATION:
  Matches 167; Conservative
  NUMBER OF SEQ ID NOS: 8564
SOFTWARE: PatentIn Ver. 3.
   PRIOR APPLICATION NUMBER: US 60/163,280 PRIOR FILING DATE: 1999-11-03
  APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K.
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR
TITLE OF INVENTION: EXPRESSION ANALYSIS TWO
FILE REFERENCE: AEOMICA-X-2
   CURRENT APPLICATION NUMBER: US/10/029,386
CURRENT FILING DATE: 2001-12-20
  APPLICANT: Penn, Sharron G.
APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K
   TYPE: PRT
ORGANISM: Homo sapiens
   NAME/KEY: MISC_FEATURE
  OTHER INFORMATION: MAP TO AC004030.1
OTHER INFORMATION: EXPRESSED IN HELA, SIGNAL =
   FEATURE:
   ORGANISM: Homo sapiens
  ENGTH: 172
   101
  144 SPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRHKNAMAER 203
   161
  204 WESRIYASEEDD 215
   131 ITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQW 173
  41
  84
  24 PRGCPOANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQKSQSSDLL
   Similarity
  ERERESVLRREQEVAEERRNALFPEVFSPTPDENSDONSRSSSQASGITGSYSVSESPFF 143
  SPIHLHSNVAWTVEDXVDSAPPGQRKKEQWYAGINPSDGINSEVLEAIRVTRHKNAMAER
  ERERESVLRREQEVXEERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVSESPFF 100
   PTRPPQANRGVVRWEYPRLRPLRPR-------APALRLQKSQSSDLL
   WESRIYASEEDD 172
  74.1%;
87.0%;
   20.8%; Score 236; DB 4; 1
100.0%; Pred. No. 6.2e-14;
  0
  Score 839; DB 4;
Pred. No. 1.3e-67;
  Mismatches
  0.42
   Length 172;
  Length 43;
  Indels
   Indels
  20;
   0
   40
   83
   0
```

RESULT 10 US-10-278-547-43

Sequence 43, Application US/10278547 Publication No. US20030082619A1 GENERAL INFORMATION:

BILLING-MEDEL, PATRICIA COHEN, MAURICE COLPITTS, TRACEY L.

```
밁
                         S
  US-09-050-516-43
  Matches
   Query Match
   Best Local
   GENERAL INFORMATION
   INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 36 amino acids
TYPE: amino acid
  SOFTWARE: FASTEM: DOS
SOFTWARE: FASTESEQ for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER
   APPLICATION NUMBER: 08/8 FILING DATE: 31-MAR-1997 ATTORNEY/AGENT INFORMATION:
  ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   TITLE OF INVENTION:
TITLE OF INVENTION:
  CORRESPONDENCE ADDRESS
  TELECOMMUNICATION INFORMATION: 547/935-1729
   PRIOR APPLICATION DATA:
   APPLICANT:
   APPLICANT:
   MOLECULE TYPE:
   NUMBER OF SEQUENCES:
  APPLICANT:
   APPLICANT:
   PPLICANT:
   NAME: Becker, Cheryl L. REGISTRATION NUMBER: 35. REFERENCE/DOCKET NUMBER:
  STREET: 100 Abbott Park Road
CITY: Abbott Park
  STRANDEDNESS: single
TOPOLOGY: linear
MECULE TYPE: No. US20010010904Ale
   FILING DATE
  COMPUTER: IBM CONCERNING SYSTEM:
  COUNTRY:
  TELEFAX: 847/938-2623
  TELEPHONE:
  CLASSIFICATION:
  ADDRESSEE: Abbott Laboratories
  36;
                             1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
  60064-3500
   Similarity
   US20010010904A1
   I
   Application US/09050516
   USA
  GRANADOS,
   ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
   COLPITTS, TRACEY L.
  Conservative
   HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
  FRIEDMAN, PAULA N.
   BILLING-MEDEL, PATRICIA
  IBM Compatible
   JULIAN
   MARK
  16.7%;
  REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  EDWARD N.
  49
  08/828,855
  35,441
  43:
   6065.US.P1
  ..
   Score 189;
Pred. No.
   Mismatches
   8.7e-10;
  DB 3;
   36
   Length 36;
   0
   Gaps
   0
```

```
RESULT 11
US-10-646-873-43
; Sequence 43, Application US/10646873
; Publication No. US20040043406A1
; GENERAL INFORMATION:
   밁
   Ś
   US-10-278-547-43
   Matches
  Query Match
Best Local Similarity
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 43:
SEQUENCE CHARACTERISTICS:
   APPLICATION NUMBER: US/09/050,516
FILING DATE: <Unknown>
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE(DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
  TOPOLOGY: linear
MOLECULE TYPE: No. US20030082619A1e
SEQUENCE DESCRIPTION: SEQ ID NO: 43:
  COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FRACUSEO for Windows Version 2.0
CURRENT APPLICATION DATA:
  ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  TOPOLOGY:
  PRIOR APPLICATION DATA:
   APPLICANT:
  NUMBER OF SEQUENCES: 49
   36;
  1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
  APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
  STREET: 100 Abbott Park Road CITY: Abbott Park
  LENGTH: 36 amino acids
   COUNTRY: USA
   STRANDEDNESS: single
  TELEFAX: 847/938-2623
   SPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
   Conservative
   : BILLING-MEDEL, PATRICIA COHEN, MAURICE COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN GRANADOS, EDWARD N.
HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
  GRANADOS,
   FRIEDMAN, PAULA N.
  16.7%; Score 189; DB 4; 100.0%; Pred. No. 8.7e-10;
   JULIAN
  EDWARD N.
   0;
   Mismatches
  Length 36;
   Indels
   °,
   Gaps
   0
  밁
   Ś
  RESULT 12
US-09-050-516-45
  US-10-646-873-43
  Matches
   Query Match
  Best
  GENERAL INFORMATION:
APPLICANT: BILLIN
  APPLICANT:
  APPLICANT:
   APPLICANT:
   APPLICANT:
  APPLICANT:
   Local
   NUMBER OF SEQUENCES:
  36;
   Similarity
   ZIP: 60064-3500
   HAYDEN, MARK
  GRANADOS,
  Conservative
  USA
```

```
Sequence 45, Application US/09050516 Patent No. US20010010904A1
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 43:
SEQUENCE CHARACTERISTICS:
APPLICANT: HODGES, STEVEN C.
APPLICANT: KLASS, MICHAEL R.
APPLICANT: KRANGCHVIL, JON D.
APPLICANT: ROBERTS-RAPP, LISA
APPLICANT: RUSSELL, JOHN C.
APPLICANT: STROUBE, STEPHEN D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
TITLE OF INVENTION: FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASESEQ for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/646,873
FILING DATE: 22-Aug-2003
CLASSIFICATION: -Unknown>
   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: 30-MAR-1998
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: BECKEY Cheryl I
  STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: No. US20040043406Ale
SEQUENCE DESCRIPTION: SEQ ID NO: 43:
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   TELECOMMUNICATION INFORMATION:
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
  1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
   1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
  NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
   TYPE: amino acid
  TELEFAX: 847/938-2623
  LENGTH: 36 amino acids
  TELEPHONE: 847/935-1729
  COHEN, MAURICE COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
   BILLING-MEDEL, PATRICIA
   16.7%; Score 189; DB 4;
100.0%; Pred. No. 8.7e-10;
ive 0; Mismatches 0;
  EDWARD N.
  TRACEY L.
  Length 36;
  Indels
  0
  Gaps
  0
```

CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott, Laboratories

100 Abbott Park Road

NUMBER OF SEQUENCES: TITLE OF INVENTION:

49

```
US-10-278-547-45
  TOPOLOGY: linear
; MOLECULE TYPE: No. US20010010904Ale
JS-09-050-516-45
   Query Match
Best Local Similarity 100.
   Sequence 45, Applicati
Publication No. US2003
GENERAL INFORMATION:
  NFORMATION FOR SEQ ID NO:
   SEQUENCE CHARACTERISTICS:
LENGTH: 35 amino acids
TYPE: amino acid
  SUFTWARE: FASTEM: DOS
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/no/--
FILING DATE:
CLASS--
   PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/8
PILING DATE: 31-MAR-1997
  REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
  FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
  CITY: Abbott Park
  STRANDEDNESS:
   TELEFAX: 847/938-2623
  CLASSIFICATION:
  HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KLASCHVIL, JON D.
KRATPOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
  APPLICANT:
  NUMBER OF SEQUENCES:
  104 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 138
   1 ALPPEVESPTPDENSDONSRSSSQASGITGSYSVS 35
   60064-3500
   Becker, Cheryl L.
   CITY: Abbott Park
   Application US/10278547
   USA
60064-3500
  BILLING-MEDEL, PATRICIA
  COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
   COHEN, MAURICE
  GRANADOS,
   single
               USA
  15.5%;
  08/828,855
  EDWARD N.
  45:
  <u>.</u>
  Score 175; DB 3;
Pred. No. 1.5e-08;
  Mismatches
   Length 35
  0,
  0
   á
  밁
  Query Match
   Matches
   Local
```

문

```
; MOLECULE TYPE: NO. US20030082619A1e; SEQUENCE DESCRIPTION: SEQ ID NO: 45: US-10-278-547-45
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 45:
SEQUENCE CHARACTERISTICS:
   NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 600
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
  APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: <Unknown>
  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   SOFTWARE: FastSEQ for Windows Version 2.0 CURRENT APPLICATION DATA:
104 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 138
  Similarity
   TYPE: amino acid
STRANDEDNESS: single
  APPLICATION NUMBER: US/10/278,547 FILING DATE: 23-Oct-2002 CLASSIFICATION: <Unknown>
   COMPUTER: IBM Compatible OPERATING SYSTEM: DOS
   TOPOLOGY: linear
   TELEFAX: 847/938-2623
   LENGTH: 35 amino acids
  Conservative
  15.5%; Score 175; DB 4; 100.0%; Pred. No. 1.5e-08;
  0,
  Mismatches
   6065.US.P1
  0,
  Length 35;
  Indels
```

0

US-10-646-873-45
; Sequence 45, Application; Publication No. US2004
; GENERAL INFORMATION: COUNTRY: USA
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS: KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL APPLICANT: BILLING-MEDEL, PATRICIA COHEN, MAURICE COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN GORDON, JULIAN ADDRESSEE: Abbott Laboratories STREET: 100 Abbott Park Road CITY: Abbott Park COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version 2.0
INT APPLICATION DATA: STATE: IL Application US/10646873 No. US20040043406A1 HODGES, STEVEN C. GRANADOS, EDWARD N. MARK TRACT

PRIOR

APPLICATION NUMBER: US/10/646,873
FILING DATE: 22-Aug-2003
CLASSIFICATION: CURNOWN>
APPLICATION DATA:

```
TOPOLOGY: linear;

MOLECULE TYPE: NO. US20040043406Ale
SEQUENCE DESCRIPTION: SEQ ID NO: 45:
US-10-646-873-45
  RESULT 15
US-09-050-516-46
  밁
   S
  Sequence 46,
   Matches 35; Conservative
   Query Match
  TELEFAX: 847/938-2623
TELEX: cUnknown:
INFORMATION FOR SEQ ID NO: 45:
SEQUENCE CHARACTERISTICS:
LENGTH: 35 amino acids
TYPE: amino acid
STRANDEDNESS: single
COUNTRY: USA

COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE:
  Patent No.
   Best Local Similarity
  APPLICANT: HAYDEN, MAPPLICANT: HOOSES, S'APPLICANT: KLASS, MI APPLICANT: KRAYOCHVI ROBERTS-R APPLICANT: RUSSELL, APPLICANT: STROUPE, TITLE OF INVENTION: TITLE OF INVENTION:
   APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
   APPLICANT:
APPLICANT:
  NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
  APPLICATION NUMBER: US/09/050,516
FILING DATE: 30-MAR-1998
APPLICATION NUMBER: 08/28,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
  STATE:
  TELECOMMUNICATION INFORMATION: TELEPHONE: 847/935-1729
   104 ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS 138
  I: HAYDEN, MARK
I: HOOGES, STEVEN C.
T: KLASS, MICHAEL R.
T: KRAYOCHVIL, JON D.
T: ROBERTS-RAPP, LISA
T: RUSSELL, JOHN C.
STRUSEEL, JOHN C.
STRUSEEL, JOHN C.
F INVENTION: REAGRATS AND METHODS USEFUL
F INVENTION: FOR DETECTING DISEASES OF THE GASTROINTESTINAL
F INVENTION: TRACT
  US20010010904A1
  ALFPEVESPTPDENSDONSRSSSOASGITGSYSVS 35
  Application US/09050516
   COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
   GRANADOS, EDWARD N.
   COHEN, MAURICE
  BILLING-MEDEL, PATRICIA
   15.5%; Score 175; DB 4; 100.0%; Pred. No. 1.5e-08;
   0; Mismatches
  6065.US.P1
   Length 35;
   Indels
   0;
   Gaps
   <u>,</u>
```

```
밁
Search completed: March
Job time: 94.4412 secs
   ; MOLECULE TYPE: No. US20010010904A1e US-09-050-516-46
  Query Match 15.1%;
Best Local Similarity 97.0%;
Matches 32; Conservative
  INFORMATION FOR SEQ ID NO:
   SEQUENCE CHARACTERISTICS:
LENGTH: 33 amino acids
TYPE: amino acid
STRANDEDNESS: single
   NAME: Becker, Cheryl L.
REGISTION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 601
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
  APPLICATION NUMBER: 08/8
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
   PRIOR APPLICATION DATA:
   TOPOLOGY:
   TELEX:
  TELEFAX: 847/938-2623
  157 EDPVDSAPPGQRKKEQWYAGINPSDGINSEVLE 189
   1 BDSVDSAPPGORKKEOWYAGINPSDGINSEVLE 33
   linear
               3, 2006, 14:18:11
  08/828,855
   46:
  0;
  6065.US.P1
   Score 171; DB 3;
Pred. No. 3.3e-08;
  Mismatches
  Length 33;
  Indels
  <u>,,</u>
  Gaps
```

0;

ş

protein

Title: Perfect score:

Scoring table: Sequence:

Minimum DB Maximum DB

Database

Sequence Sequence Sequence

Sequence Sequence Sequence

Sequence Sequence Sequence Sequence

Sequence Sequence

920, App
537, App
73, App
3397, Ap
988, App
988, App
242, App
3340, Ap
1050, Ap
1050, Ap
1050, App
107, App
107

Sequence Sequence Sequence

Sequence Sequence Sequence Sequence

```
Post-processing: Minimum Match 0%
  Total number of hits satisfying chosen parameters:
  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
  seq length: 0
seq length: 2000000000
  protein search, using sw model
  Published Applications AA_New:*

1: /cgn2 6/ptodata/1/pubpaa/USO8_NEW_PUB.pep:*

2: /cgn2-6/ptodata/1/pubpaa/USO6_NEW_PUB.pep:*

3: /cgn2-6/ptodata/1/pubpaa/USO7_NEW_PUB.pep:*

4: /cgn2-6/ptodata/1/pubpaa/JSO7_NEW_PUB.pep:*

5: /cgn2-6/ptodata/1/pubpaa/USO7_NEW_PUB.pep:*

6: /cgn2-6/ptodata/1/pubpaa/USO7_NEW_PUB.pep:*

7: /cgn2-6/ptodata/1/pubpaa/USO7_NEW_PUB.pep:*

8: /cgn2-6/ptodata/1/pubpaa/USO1_NEW_PUB.pep:*
  BLOSUM62
Gapop 10.0 ,
   US-10-646-873-47
1132
  March
  135346 ведв,
  Listing first 45
   Maximum Match 100%
  MSPRHLSESSGKPLSTKQEA.....
6666666666667777777777
   GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
   Length DB
  3, 2006, 14:10:51 ;
388
7346
1346
470
390
1596
287
397
1231
1231
706
597
419
570
580
748
605
605
  20000420 residues
  Gapext 0.
                               US-11-087-099-12026
US-11-072-512-3421
US-10-858-730-83
US-10-467-657-4780
US-11-060-005-2
US-11-060-005-4
US-11-098-686-10913
US-11-081-512-3485
US-11-072-512-2485
US-11-072-512-3588
US-11-072-512-3588
US-11-072-512-3588
US-11-072-512-3588
US-11-072-512-3588
US-11-072-512-3514
US-11-087-099-1375
US-11-1072-512-375
US-11-1072-512-375
US-11-1072-512-375
US-11-1072-512-375
US-11-1072-513-375
US-11-1082-545-13
US-10-982-545-13
US-10-982-545-13
US-10-933-1158-160
US-11-1143-9844A-114
   ij
  summaries
                  S-10-131-826A-160
S-10-973-115B-160
S-11-143-984A-114
S-10-995-561-918
  SUMMARIES
  Search time 10.2381 Seconds (without alignments)
420.009 Million cell update
  HKNAMAERWESRI YASEEDD
  cell updates/sec
   Sequence 3421
Sequence 83,
Sequence 4780
   Description
   Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
   Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
  Sequence 12026, A
Sequence 3421, Ap
   B. 83 Appl
27, Appl
27, Appl
2022, Appl
2022, Appl
2022, Appl
2023, Appl
2025, Appl
2025, Appl
2026, Appl
2026
13, Appl
160, App
160, App
114, App
918, App
919, App
  215
   RESULT 1

US-11-087-099-12026

US-11-087-099-12026

Sequence 12026, Application US/11087099

Publication No. US20060041961A1

GENERAL INFORMATION:
APPLICANT: Abad, Mark S. et al.
TITLE OF INVENTION: Genes and Uses for Plant Improvement
FILE REFERENCE: 38-21(53450)B EP
CURRENT APPLICATION NUMBER: US/11/087,099

CURRENT FILING DATE: 2005-03-22

NUMBER OF SEQ ID NOS: 12464

SEQ ID NO 12026

LENGTH: 386

TYPE: PRT
ORGANISM: Triticum aestivum
US-11-087-099-12026
GENERAL INFORMATION:
APPLICANT: ISCGAI, TAKAO
APPLICANT: SUGIYAMA, TOMOYAM
APPLICANT: OTSUKI, TETSUJI;
APPLICANT: WAKAMATSU, AI
APPLICANT: SATO, HIROYUKI
   RESULT 2
US-11-072-512-3421
US-11-072-512-3421, Application US/11072512
; Publication No. US20060029945A1
; Publication No. US20060029945A1
  ð
  밁
  Ś
   밁
   5
   맑
  밁
   Query Match
Best Local :
  Matches
   Match 8.6%; Score 97.5; D Local Similarity 24.7%; Pred. No. 0.1; Pee 45; Conservative 30; Mismatches
  181
   150
  267 DDVPSSDPSSEPKESSPKVSPTHVHSNS--ISEDPALTETSEPTRNGQEVHYVGEVIHPF
   210 ATAAMEAVEAQQQQITFDRLLAMVDAERTYHQNVADILNKLHDEMLNARPHEESDNN---
   41 RIRPIRFRAPDEPQQAQVPHVWGWEV-----AGAPALRIQKSQS--SDL-----LERE
   87 ----RESVLRREQEVABER-----
  - F
   RLLTYRYQRIRQDMESQIADVVRRQLKSKESSGNTDSVKLQHAESKLSELRTTLAALGKE
   SSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDP--VDSAPPGQRKKEQWYAG--INPS
  ដូ-
  aaaaaaaaaaaaaaaaa
  TOMOYASU
   US-11-072-512-3397

US-11-072-175-184

US-10-995-561-988

US-11-072-175-242

US-11-072-512-34050

US-10-312-234-1050

US-10-310-73-42

US-11-169-041-170

US-11-180-099-1677

US-11-180-199-1677

US-11-180-199-1679

US-11-180-199-1679

US-11-180-199-1679

US-11-180-199-1679

US-11-180-199-1679

US-11-180-199-1679

US-11-180-199-1679

US-11-180-199-16879

US-11-180-199-16885-3

US-11-072-512-3477
  US-10-995-561-920
US-11-087-099-5370
US-11-044-051-73
  ALIGNMENTS
  -----RNALFPEVFSPTPDENSDQNSRS 124
  DB 7;
  62;
  Length
  Indels
```

45;

Gaps

209

98

180 266 Result

ŏ

Score

97.5 88.5 87 86 82.5 80.5

79.5 79.5 79.5 79.5 78.5 78.5 78.5 76.5 76.5 76.5 76.5 76.5 76.5

APPLICANT: APPLICANT: APPLICANT:

APPLICANT:

ISHII, SHIZUKO YAMAMOTO, JUN-ISONO, YUUKO

MOTO, JUN-ICHI O, YUUKO YURI

```
Ś
  Ş
  ş
   RESULT 3
US-10-858-730-83
   밁
  Ś
   ద
   밁
  밁
  ; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-072-512-3421
   Sequence 83, Application US/10858730 Publication No. US20050255568A1 GENERAL INFORMATION:
  Query Match
Best Local
  SOFTWARE: PatentIn Ver. 2.1 SEQ ID NO 3421
  Matches
   APPLICANT:
APPLICANT:
   PRIOR APPLICATION NUMBER: US 60/350,978
PRIOR FILING DATE: 2002-01-25
PRIOR APPLICATION NUMBER: JP 2001-379298
PRIOR FILING DATE: 2001-11-05
NUMBER OF SEQ ID NOS: 4096
  APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
   APPLICANT:
  APPLICANT: NAGAHARI, KENJI
APPLICANT: MASUHO, YASUHIKO
TITLE OF INVENTION: Novel full length cDNA
FILE REFERENCE: 084335-0191
CURRENT APPLICATION NUMBER: US/11/072,512
CURRENT FILING DATE: 2005-03-07
   APPLICANT:
   APPLICANT: Walbridge, Michael J.
APPLICANT: Yorgey, Peter S.
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR AMINO ACID
TITLE OF INVENTION: PRODUCTION
FILE REFERENCE: 14184-030001
CURRENT PROLICATION NUMBER: US/10/858,730
CURRENT FILING DATE: 2004-06-01
PRIOR APPLICATION NUMBER: US 60/475,000 PRIOR FILING DATE: 2003-05-30 PRIOR APPLICATION NUMBER: US 60/551,860
  APPLICANT: Bailey, Richard B. APPLICANT: Blomquist, Paul
  APPLICANT:
   APPLICANT:
   APPLICANT:
  APPLICANT:
  ENGTH: 371
  7.8%; Score 88.5; DB 7; Length 371;
Local Similarity 22.1%; Pred. No. 0.69;
Les 42; Conservative 33; Mismatches 86; Indels 2
   293
  110
   344 VPGQRQLPAW 353
  164 PPGORKKEOW 173
   233
  173 QRMRKMSQBICTLKKEKQQDMRRVEKLERSLSKLKNQMAEPLPPEPPAVPSEVELQHLRK 232
  64 --WEVAGAPALRLQKSQSSDLLE-----RERESVLRREQEVAEERRNALF-----PEV
   4 RHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWG
  FSPTPDENS-----DONSRSSSOASGITGSYSVSESPFFSPIHLHSNVAWTVEDPV-DSA 163
   ELERVAGALQAQVKNNQRISLLNRGQEERIREQEERLRKQEERIQEQHKSLQQLAKPQSV
   OTSUKA, KAORU
NAGAI, KEIICHI
IRIE, RYOTARO
TAMECHIKA, ICHIRO
   FEEPNNENKSALQLEQQVKELQEKLG-
  Trueheart, Joshua
Walbridge, Michael J.
   O'Leary, Jessica
O'Toole, George
   Driggers, Edward M
Madden, Kevin T.
  Doten, Reed
   SEKI, NAOHIKO
YOSHIKAWA, TSUTOMU
OTSUKA, MOTOYUKI
   -SKKGWEAGSSLWGGE
  29;
  Gaps
   109
   292
   63
```

RESULT 5 US-11-060-005-2

Sequence 2, Application US/11060005
Publication No. US20050260693A1
GENERAL INFORMATION:

APPLICANT: Irwin H. Gelman

```
Ś
   S
   밁
  S
  밁
   S
                                  Ś
  밁
   В
   밁
  S
  ; ORGANISM: Neisseria gonorrhoeae US-10-467-657-4780
  US-10-467-657-4780
   US-10-858-730-83
   Sequence 4780, Application US/10467657
Publication No. US20050260581A1
GENERAL INFORMATION:
  PRIOR FILING DATE: 2004-03-10
NUMBER OF SEQ ID NOS: 364
SOFTWARE: FREESEQ for Windows Version 4.0
SEQ ID NO 83
   NUMBER OF SEQ ID NOS: 9218
SOFTWARE: SeqWin99, version
SEQ ID NO 4780
LENGTH: 736
  Matches
   Query Match
   Query Match
  Matches
   Best Local
  CURRENT APPLICATION NUMBER: US/10/467,657
CURRENT FILING DATE: 2003-08-11
PRIOR APPLICATION NUMBER: GB-0103424.8
   APPLICANT: CHIRON SPA
APPLICANT: FONTANA Maria Rita
APPLICANT: PIZZA Mariagrazia
APPLICANT: MASIGNANI Vega
APPLICANT: MONACI Elisabetta
TITLE OP INVENTION: GONOCOCCAL PROTEINS AND
FILE REFERENCE:
  PRIOR FILING DATE: 2001-02-12
  LENGTH: 388
TYPE: PRT
ORGANISM: Thermobifida fusca
   TYPE: PRT
  Match 7.6%;
Local Similarity 21.6%;
     567
                                    170 KEQWYAGINPSD---GINSEVLEA 190
  117 NSDONSRSSSOASGITGSYSVSESPFFS-----PIHLHSNVAWTVEDPVDSAPPGORK 169
  476 ----AGTARTSAKSIQTASEAETPPENQVSKNKAADNETEASL----SEVPSE
   425 PRPEADAAQTPVQTASAAAMPSEGKTAGPVSHQENNDVPPWE------DAPDKTETA 475
   57 QVPHVWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDE 116
   74 VGDMLGSPTPRPAPRPRRISELLARK 99
  64 -WEVAGAPALR--LOKSOSSDLLERE 86
  44;
  28;
  3 PRHISESSGKPISTKQEASKPPRG-----CPQANRGVVRWEYFRIRPIRFRAPDEPQQA 56
  6 LSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWG--
   Similarity
  NPIQATPNDEAVETETFAHEAPAEPFYGFPDNDCPP
----WANVLPADTAGGGTDEEAEA 586
  Conservative
  Conservative
   version 1.04
   32.6%;
  14;
  25;
   Score 87;
Pred. No. 1
  Score 86; DB Pred. No. 2.7;
  Mismatches
  Mismatches
  DB 6;
   BB
   NUCLEIC
   6
  77;
  38;
  Length 736;
   Length 388;
  Indels
   ACIDS
  Indels
  EDGVEIPPD---
  58;
  6;
  Gaps
  566
```

79;

62;

Gaps

224

Length 470; Indels

```
US-11-072-512-2022
APPLICANT: SEKI, NAOHIKO
APPLICANT: YOSHIKAWA, TSUTOMU
APPLICANT: OYOUKA, MOTOYUKI
APPLICANT: NAGAHARI, KENJI
APPLICANT: NAGHARI, KENJI
APPLICANT: MASUHO, YASUHIKO
TITLE OP INVENTION: NOVEL full length cDNA
FILE REFERENCE: 084335-0191
CURRENT APPLICATION NUMBER: US/11/072,512
CURRENT FILMS DATE 2005-03-07
PRIOR APPLICATION NUMBER: US 60/350,978
   Query Match
Best Local
  Sequence 2022, Application US/11072512 Publication No. US20060029945A1
  SOFTWARE: PastSEQ for Windows Version 
EQ ID NO 2
  PRIOR APPLICATION NUMBER: 08/635,121 PRIOR FILING DATE: 1996-04-19
  TITLE OF INVENTION: TUMOR SUPPRESSOR GENE FILE REFERENCE: A30558-A-FWC-A-A 070156.0597 CURRENT APPLICATION NUMBER: US/11/060,005 CURRENT FILING DATE: 2005-02-17 PRIOR APPLICATION NUMBER: 09/902,432 PRIOR FILING DATE: 2001-07-10 PRIOR FILING DATE: 2001-07-10
  PRIOR APPLICATION NUMBER: 08/978,277
PRIOR FILING DATE: 1997-11-25
   ORGANISM: Rattue norvegicus
11-060-005-2
  NUMBER OF SEQ ID NOS:
   PRIOR APPLICATION NUMBER: 08/665,401
   TYPE: PRT
  ENGTH: 1346
   FILING DATE: 1996-06-18
  INFORMATION:
  180
  378 EAGRTLVVGAGCPLRSNRVEKNLGFPLRNSSPDGGRKGOMGROEQATVEDSGPVEINEDE
   318 RORSRTDAVPASTQEQDQAQGSSSPEPAGSPSEGEGVSTWESFKRLVTPRKKSKSKLEEK 377
   548 EGKDAHDDMVTSEVDFTSEAVTATETSEALRTEEVTEASGAEE 590
   129 SGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSA-PPGQRKKEQ-WYAGINP----- 179
   438 PDVPAVVPLSEYDAVEREK---
  488 AVIDGTRAVTSVEERSPSWISASVTEPLEHTAGEAMPPVEEVTEKDIIAEETPVLTQTLP
   79
   4 RHLSESSGKPLSTKQE-----ASKPPRGCPQANRGVVRWEYFR-------
  Similarity
  -----SDGINSEV---LEAIRVTRHKNAMAERWESRIYASEE 213
   OTSUKA, KAORU
NAGAI, KEIICHI
IRIE, RYOTARO
TAMECHIKA, ICHIRO
   SUGIYAMA, TOMOYA
OTSUKI, TETSUJI
WAKAMATSU, AI
SATO, HIROYUKI
  SONO
  AMAMOTO,
  TSUKA,
  Conservative
   YER
  SHIZUKO
TO, JUN-ICHI
   TAKAO
  YUUKO
  7.3%;
   TOMOYASU
  -DLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQNSRSSSQA 128
   -----PLRFRAPDEPQQAQVPHVWGWEVAGAPALRLQKSQ
  Score 82.5;
Pred. No. 1
  Mismatches 109;
   ----MEAQGNAELPSCWGCVVSEELSKTLVHTVSV
  DB 7; Length 1346;
  Indels
  83;
  78
  밁
  S
   밁
   8
  ; ORGANISM: Homo US-11-072-512-2022
  뭉
   밁
   8
   밁
  皮
                            S
  밁
   S
  ફ
   S
  ORGANISM: Lawsonia intracellularis US-11-098-686-10913
   SOFTWARE: Pate
SEQ ID NO 2022
LENGTH: 470
  Query Match
Best Local Similarity
   SOFTWARE: FastSEQ for Windows Version SEQ ID NO 10913
   Sequence 10913, Application US/11098686 Publication No. US20060024696A1
   Matches
   Matches
  GENERAL INFORMATION
  Query Match
  PRIOR FILING DATE: 2002-01-25
PRIOR APPLICATION NUMBER: JP
PRIOR FILING DATE: 2001-11-05
  PRIOR APPLICATION NUMBER: PCT/US03/31318
PRIOR FILING DATE: 2003-10-01
PRIOR APPLICATION NUMBER: US 60/416,395
   APPLICANT: Kapur, Vivek and Gebhart, Connie J.
TITLE OF INVENTION: NUCLBIC ACID AND POLYPEPTIDE SEQUENCES
TITLE OF INVENTION: FROM LAWSONIA INTRACELLULARIS AND METHODS
  NUMBER OF SEQ ID NOS: 4096
  NUMBER OF SEQ ID NOS:
   CURRENT APPLICATION NUMBER: US/11/098,686
CURRENT FILING DATE: 2005-04-04
   FILE REFERENCE: 09531-128001
  PRIOR FILING DATE: 2002-10-04
   TYPE: PRT
   ENGTH: 390
   Local
  174 NSQVLEIEKLNETMERQRTEVARLQNVLDLTGSDNKGGFENVLEBIÄELRR
   123 QEAERFSRKAAQAARDLTRAEAEIELLQNLLRQKGEQFRL--EMEKTGVG-----TGA 173
                        190 A 190
  281 RKPRPGQQDGKE---GSQPPPASGYWVYSPIRSGLHK 314
  161 DSAPPGORKKEOWYAGINPSDGINSEVLEAIRVTRHK 197
  191 LSLHQE---
   146 IHLHSNVAWTVEDPVDS-----
   144 -----
   18 QEASKPPRGCPQANRGVVRWE-----YFRLRPLRFRAPDEPQQAQVPHVWGWEVAGA 69
  91
   50 PDEPQQAQVP-----
   52;
   39,
   PatentIn Ver.
   Similarity
   ----EVSYQNDYISSMADPFKRRGYWYFMPPPPSSKVSSHSSQATKDSGVGLKYSASTPV
   PTPDENSDONSRSSSOASGI--TGSYSVSESPFFSPIHLHSNVA------WTVEDPV 160
  LRREQEVAEERRNALFPEVFSPTPDEN--SDQNSRSSSQASGITGSYS---VSESPFFSP 145
   PQKPQRLSIPLTTSVKLTTSNNSDNDEDWGDDGWDAPHPESSAVEHGMKQDFLEQGQ---
   Conservative
   Conservative
   7.1%;
21.5%;
  7.2%;
  -GEPGDSFDTAKAKLEVFMQKRHEPPQQPTKKP---
   SLFSSVLNGTYSRNTISERGERDQSSASPSASSYONGRLVDSSSSCP 190
   24;
  2001-379298
   19;
   Score 80.5; DI
Pred. No. 4.1;
19; Mismatches
   Score 82; 1
Pred. No. 3
   ------HVW----GWEVAGAPALRLQKSQSSDLLERERESV 90
   Mismatches
   ----APPGORKKEOWYAGINPSDGINSEVLE 189
  DB 7;
  DB 7;
```

OF USING

58;

65;

8

143

- IGPRDEPNNAFKE

Length 390; Indels

밁 ঠ 밁 ঠ

ঠ

S 밁 ঠ 밁

```
밁
  닭
  US-11-072-512-2485
   S
  ঠ
  밁
  ş
   밁
  ঠ
  문
  8
  ; TYPE: PRT ; ORGANISM: Rattus norvegicus US-11-060-005-4
   RESULT 8
US-11-060-005-4
   RESULT 9
  Sequence 2485, Application US/11072512 Publication No. US20060029945A1 GENERAL INFORMATION:
   Sequence 4, Application US/11060005
Publication No. US20050260693A1
GENERAL INFORMATION:
APPLICANT: Irwin H. Gelman
   Query Match 7.1%; Score 80; DB 7; Length 1596; Best Local Similarity 18.5%; Pred. No. 26; Matches 46; Conservative 37; Mismatches 93; Indels
   SOFTWARE: FastSEQ for Windows Version SEQ ID NO 4
   APPLICANT:
   PRIOR APPLICATION NUMBER: 08/665,401
PRIOR FILING DATE: 1996-06-18
PRIOR APPLICATION NUMBER: 08/635,121
PRIOR FILING DATE: 1996-04-19
NUMBER OF SEQ ID NOS: 35
  TITLE OF INVENTION: TUMOR SUPPRESSOR GENE FILE REFERENCE: A30558-A-FWC-A-A 070156.0597 CURRENT APPLICATION NUMBER: U$/11/060,005 CURRENT FILING DATE: 2005-02-17
   APPLICANT: ISOGAI, APPLICANT: SUGIYAN
  APPLICANT:
  APPLICANT:
   PRIOR APPLICATION NUMBER: 08/978,277
PRIOR FILING DATE: 1997-11-25
  PRIOR APPLICATION NUMBER: 09/902,432 PRIOR FILING DATE: 2001-07-10
   APPLICANT:
  APPLICANT:
   APPLICANT:
  ENGTH: 1596
  917 TEKDIIAE 924
  960
  900
  242
   195 RHKNAMAE 202
   755
  699 HRAEEASKDKEAGTDAVPASTQEQDQAQGSSSPEPAGSPSEGEGVSTWESFK----RLVT
   96 EVAEERRNALFPEVFSPTPDENSDQN------SRSSSQASGIT------GSYS 136
  50
   5 HLSESSGK------PLSTKQE-----ASKPPRGCPQANRGVVRWEYFRLRPLRFRA 49
  SUGIYAMA, TOMOYASU
OTSUKI, TETSUJI
WAKAMATSU, AI
SATO, HIROYUKI
ISHII, SHIZUKO
YAMAMOTO, JUN-ICHI
ISONO, YUUKO
HIO, YURI
  A 242
OTSUKA, KAORU
NAGAI, KEIICHI
IRIE, RYOTARO
TAMECHIKA, ICHIRO
  VSEELSKTLVH---TVSVAVIDGTRAVTSVEERSPSWISASVTEPLEHTAGEAMPPVEEV 916
  VSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAG--INPSDGINSEVLEAIRVT 194
  KRADGKQEQATVEDSGPVEINEDDPNVPAVVPLSEYNAVEREKMEAQGNTELPQLLGAVY
   PRKKSKSKLB----
  PDEPQQAQVPHVWGWEVAGAPALRLQKSQSSDL-----LERERES-----VLRREQ 95
   TAKAO
   -----EKAEDSSVEQLSTEIEPSREESWVSIKKFIPGRRK 799
   72;
   Gaps
```

```
밁
  გ
   뭉
   ; LENGTH: 697
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-821-234-905
  Ś
   밁
  Ş
   밁
  Ş
   S
   US-10-821-234-905
  ; ORGANISM: Homo sapiens US-11-072-512-2485
   ; SEQ ID NO 2485
; LENGTH: 287
; TYPE: PRT
  Query Match
Best Local Similarity
  SOFTWARE: pt_SEQ_genes Version 1.0 SEQ ID NO 905
   APPLICANT: Labat, Ivan
APPLICANT: Stache-Crain, Birgit
APPLICANT: Andarmani, Susan
APPLICANT: Andarmani, Susan
APPLICANT: Tang, Y. Tom
TITLE OF INVENTION: Methods for Diagnosis and Treatment of Preeclampsia
FILE REFERENCE: 821A
CURRENT APPLICATION NUMBER: US/10/821,234
CURRENT APPLICATION NUMBER: US 60/462,047
PRIOR APPLICATION NUMBER: US 60/462,047
PRIOR PILLING DATE: 2003-04-07
NUMBER OF SEQ ID NOS: 1704
NUMBER OF SEQ ID NOS: 1704
  GENERAL INFORMATION:
  Sequence 905, Application US/10821234
Publication No. US20050255114A1
   Matches
   Query Match 7.0%; Score 79.5; Di
Best Local Similarity 24.6%; Pred. No. 3.5;
  Matches
   CURRENT APPLICATION NUMBER: US/11/072,512
CURRENT FILING DATE: 2005-03-07
PRIOR APPLICATION NUMBER: US 60/350,978
PRIOR FILING DATE: 2002-01-25
PRIOR APPLICATION NUMBER: UP 2001-379298
PRIOR FILING DATE: 2001-11-05
NUMBER OF SEQ ID NOS: 4096
  APPLICANT:
  APPLICANT: MASUHO, YASUHIKO
TITLE OF INVENTION: Novel full length cDNA
FILE REFERENCE: 084335-0191
   SOFTWARE: PatentIn Ver. 2.1
   APPLICANT:
  105 SEMPTENLEGHSPS 118
  111 SPTPDENSDQNSRS 124
   61 KVPKQPLVLH------HPRMRTTKSPSKDMLE-----PEAELAEDLPTTKSTSVE 104
   51 DEPOQAQVPHVWGWEVAGAPALRLOKSQSSDLLERERESVLRREQEVAEERRNALFPEVF 110
  76 KSQSS----DLL-----ERERESVLRRE-QEVAEERRNALFPEVFSPTPDENSDQN- 121
  63 GPLEPWLVEAVKGAALVEAGLEGEARTPLAIPHTPWGRRPEEEAEDSGGPGEDRETLGLK 122
  49 APDEPQQAQ-----
   3 LADRTGAPAPGVTRSSQPPRHMAPGQAPHQATPWRDAHPFFLLSPVMGLLSRAWSRLRGL 62
   6 LSESSGKPLSTKQEASKPPRGCP--QANRGVVRWE----YFRLRP------LRFR
  70;
  4 PSRRCPAAHSG---WOTYILGALGINQRSHQPSFCFSSVSEVVFSSYPGFSTSEVKSEIP 60
   33; Conservative
  YOSHIKAWA, TSUTOMU
OTSUKA, MOTOYUKI
NAGAHARI, KENJI
  Conservative
  7.0%;
  30;
   11; Mismatches
  Score 79.5; DB 6;
Pred. No. 10;
90; Mismatches 103;
  ----VPHV-WG-----WEVAGAP-----ALRLQ 75
   DB 7;
   39;
   Length 287;
  Length 697;
  Indels 97;
   Indels 51;
  Gaps
   Gaps
  48
   50
```

```
ঠ
   밁
   Ś
   밁
   RESULT 11
   밁
   US-11-072-512-3588
  밁
  ş
  밁
   १
  밁
  S
                          ş
  ; ORGANISM: Homo sapiens
US-11-072-512-3588
밁
   NUMBER OF SEQ ID NOS: 4096
SOFTWARE: PatentIn Ver. 2.:
SEQ ID NO 3588
LENGTH: 312
   Query Match
Best Local Similarity
   Sequence 3588, Application US/11072512 Publication No. US20060029945A1
  Matches
   GENERAL INFORMATION:
   PRIOR APPLICATION NUMBER: US 60/350,978
PRIOR FILING DATE: 2002-01-25
PRIOR APPLICATION NUMBER: JP 2001-379298
PRIOR FILING DATE: 2001-11-05
  ICANT
  CANT: MASUHO, YASUHIKO
OF INVENTION: Novel full length cDNA
REFERENCE: 084335-0191
   176
   182
   229
   236 PGSKPSTWVSCPGEEENQATEDKRTERSKGARKTSVSPRSSGSDPRSWEYRSGEASEEKE 295
   122
   123 TSSSLPEAWGLLDDDDGMYGEREATSVPRGQGSQFADGQRAPLSPSLLIRTL-QGSDKNP 181
  108
  110
                                160
  169
   APPLICATION NUMBER: US/11/072,512 FILING DATE: 2005-03-07
 282 LGSGPP 287
  66 VAGAPALRIOKSOSSD--LLERERESVLRREO-----EVAEERRNALFP----- 107
  12
  51;
   GEEKAEEEGVAEEEGVNKFS-YPPSHRECCPAVEEEDDEEAV-----KKEAHRTSTSALS
   SRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYA-----
   SUGIYAMA, TOMOYASU
OTSUKI, TETSUJI
WAKAMATSU, AI
SATO, HIROYUKI
   PGSFDVLSPSPDSEGLSSVFSSSLPSPTN---
  ----EVFSPTPDENSDQNSRSSSQASGITGSYSVSESPFFSPIHLHSNVAW----TVEDP 159
  PAAAPALTPSSGPGSAALTLEEELQEAIRRAQLLPNRGIDDILEDQVEPDDPLPPIPLDF 228
  KPRREDSPAGAPWPRLKPKALAAARRQGSVKPSAASHRPPLPRAADTPGTAPAPTPTP-A 168
  KPLSTKQEASKP-PRGCPQA-----NRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVWGWE 65
                                VDSAPP 165
  SEKI, NAOHIKO
YOSHIKAWA, TSUTOMU
OTSUKA, MOTOYUKI
   IRIE, RYOTARO
TAMECHIKA, ICHIRO
   OTSUKA, KAORU
NAGAI, KEIICHI
   ISHII, SHIZUKO
YAMAMOTO, JUN-ICHI
   NAGAHARI,
   SONO,
  Conservative
   YURI
   YUUKO
   TAKAO
  7.0%;
  KENJI
   -SEVLEAIRVTRHKNAM
  ; Score 79; DB; Pred. No. 4.3; 16; Mismatches
  DB 7; Length 312;
  -SSSP--SPRDPTDSLDWLEALSGGPP 281
  79;
  Indels 40;
   -AERWESRI-YASEEDD 215
  Gaps
   175
   235
```

RESULT 12

```
Ś
   밁
   Ś
   S
   밁
   US-10-770-726-46
  Ş
   RESULT 13
US-11-087-099-4237
   문
                                S
  문
  8
  밁
  á
  밁
   US-10-770-726-46
   US-11-087-099-4237
  Sequence 46, Application US/10770726 Publication No. US20050266409A1 GENERAL INFORMATION:
  NUMBER OF SEQ ID NOS: 12464
SEQ ID NO 4237
LENGTH: 706
TYPE: PRT
   GENERAL INFORMATION:
APPLICANT: Abad, Mark S. et al.
TITLE OF INVENTION: Genes and Uses for Plant
FILS REFERENCE: 38-21(53450)B EP
CURRENT APPLICATION NUMBER: US/11/087,099
CURRENT FILING DATE: 2005-03-22
   SEQ ID NO 46
   Sequence 4237, Application US/11087099
Publication No. US20060041961A1
   Matches
   Query Match
  Query Match
   TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR DIAGNOSING, PREVENTING, AND TREATING TITLE OF INVENTION: CANCERS FILE REFERENCE: AM101079 (031896-010000)
CURRENT APPLICATION NUMBER: US/10/770,726
  NUMBER OF SEQ ID NOS: 48640
SOFTWARE: PatentIn version
  CURRENT FILING DATE:
   APPLICANT: Brown, E
APPLICANT: Liu, Wei
   APPLICANT: Wyeth
  ORGANISM: Homo sapiens
  ORGANISM: Fusarium oxysporum
  ENGTH: 1271
   Local Similarity
  Local Similarity
   272 PPLEYOPYOSIYVGGMMEGEGKGPLLRSQSTSEQEKRLTWPRRSYSPRSFEDCGGGYTPD 331
   589
  541 -WEALLCIHKALHKLGATYIPDEDYES-----RTAEERAEASGEGSFA-----DSHDNN
   332 CSSNENLTSSEEDFSSGQSSRVSPSP
   116 ENSDONSRSSSOASGITGSYSVSESP 141
   221 SSVGDASRÞÞYRGRSSESSCGVDGDYEDAELNÞRFLKDNLIDANGGSRÞÞ----W-----
641 HPKEPFVALH 650
                                  169 KKEQWYAGIN 178
   497 RPHSRSQLRMDEANTRPQGMTPINPPKKNK-PVRWQF---
   15 STKQEASKPP-RG-CPQANRGY-VRWEYFRLRP--LRFRAPDEPQQAQVPHVWGWEVAGA 69
  12 KPLSTKQ----EASKPPRGC-----PQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPHVW 62
   70 PALRIQKSQS---SDLLERERESVLRREQEVAEERRNALFP-EVFSP--
   42;
   43;
  RSSSQASGITGSYSVSESPFFSPIHLHSNVAW-----TVEDPVDSAPPGQR 168
  GWEVAGAPALRIOKSOSSDILERERESVLRREQEVAEERRNALFPEVFSPTPDENSDONS 122
  RGSSSSIDPKKRYNLPADPW---
   Conservative
   Conservative
  Eugene
  version 3.2
  7.0%;
28.8%;
  2004-02-04
   6.9%; Score 78.5;
22.6%; Pred. No. 1
   22;
   26;
  Score 79; DB 6; Length 1271; Pred. No. 24;
   Mismatches
   Mismatches
   -HINVRWDTSAIKKKAASVPGTPSSP--STPEGOH 640
   357
  13;
   DB 7;
  Improvement
   54;
   62
;
   Indels
   Length 706;
   Indels
   ---GIRSRNSP-----
   28;
   59;
   Gaps
   Call
   115
   271
   540
   588
   9
```

RESULT 14

US-11-072-512-3514

Sequence 3514, Application US/11072512 Publication No. US20060029945A1 GENERAL INFORMATION:

```
APPLICANT: NAGAHARI, KENJI

APPLICANT: MASUHO, YASUHIKO

TITITE OF INVENTION: NOVE1 full length cDNA

FILE REFERENCE: 084335-0191

CURRENT APPLICATION NUMBER: US/11/072,512

CURRENT FILING DATE: 2005-03-07

PRIOR APPLICATION NUMBER: US 60/350,978

PRIOR FILING DATE: 2000-01-25

PRIOR FILING DATE: 2001-379298

PRIOR APPLICATION NUMBER: JP 2001-379298

PRIOR FILING DATE: 2001-11-05

NUMBER OF SEQ ID NOS: 4096

SOFTWARE: Patentin Ver. 2.1

SEQ ID NO 3514
  RESULT 15
US-11-072-512-2709
   B
  S
  Ś
  밁
   밁
APPLICANT: ISOGAI, TAKAO
APPLICANT: SUGIYAMA, TOMOYAS
APPLICANT: OTSUKI, TETSUJI
APPLICANT: WAKAMATSU, AI
APPLICANT: SATO, HIROYUKI
APPLICANT: ISHII, SHIZUKO
   Sequence 2709, Application US/11072512 Publication No. US20060029945A1 GENERAL INFORMATION:
  Query Match
Best Local S
   -11-072-512-3514
  APPLICANT:
APPLICANT:
APPLICANT:
   APPLICANT:
   APPLICANT:
   APPLICANT:
  APPLICANT:
APPLICANT:
  LENGTH: 419
TYPE: PRT
ORGANISM: Homo Bapiens
   APPLICANT:
  APPLICANT:
  / Match 6.9%; Score 78; DB 7; Length 419; Local Similarity 20.3%; Pred. No. 7.7; ength 419; Score 78; DB 7; Length 419; Length
   319
   358 QPQQQTPQEQTPPPQQQQQQQQQQVTCSVSEDLS 389
  157 ----EDPVDSAPPGORKKEOWYAGINPSDGIN 184
  104 ALFPEVESPTPDENSDONSRSSSOASGITGSYSVSESPFFSFIHLHSNVAWTV-----
   265 THIAIPQEAYNAVHVSGSPTÄLAAVK-----LEDDKEKMVGTTSVVKNSHEEVVQTLAN
  59 PHVW-----GWEVAGAP-ALRLQKSQSSDLLERERES-----VLRREQEVAEERRN
   5 HLSESSGKPLSTKQEA-----SKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQV
   WAKAMATSU, AI
SATO, HIROYUKI
ISHII, SHIZUKO
YAMAMOTO, JUN-ICHI
   SUGIYAMA, TORKE, SUGIYAMA, TORKE, TETSUJI
   SLFPAQF-----MNGNIHIPVAVQAVAGTY----
  OTSUKA, KAORU
NAGAI, KEIICHI
IRIE, RYOTARO
TAMECHIKA, ICHIRO
   SEKI, NAOHIKO
YOSHIKAWA, TSUTOMU
OTSUKA, MOTOYUKI
   ISONO, YUUKO
HIO, YURI
  TOMOYASU
  TOMOYASU
   -QNTAQTVHIWDPQQ 357
  84;
  Gaps
  156
   318
   103
   58
```

```
밁
  ; LENGTH: 571
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-072-512-2709
밁
                               5
  Query Match
Best Local Similarity
Matches 29; Conserv
   SOFTWARE: PatentIn Ver. 2.1 SEQ ID NO 2709
   CURRENT APPLICATION NUMBER: US/11/072,512
CURRENT FILING DATE: 2005-03-07
PRIOR APPLICATION NUMBER: US 60/350,978
PRIOR FILING DATE: 2002-01-25
PRIOR APPLICATION NUMBER: UF 2001-379298
PRIOR PILING DATE: 2001-11-05
PRIOR PILING DATE: 2001-11-05
PRIOR PILING DATE: 2001-11-05
PRIOR PILING DATE: 2001-11-05
   APPLICANT: MASUHO, YASUHIKO
TITLE OF INVENTION: Novel full length cDNA
FILE REFERENCE: 084335-0191
  APPLICANT:
  APPLICANT:
APPLICANT:
APPLICANT:
  APPLICANT:
  APPLICANT:
   APPLICANT:
  APPLICANT:
   APPLICANT:
   APPLICANT:
  PPLICANT:
   348 RAGTSVIKER----IPE--SPSPAPSLEENHRPGSQTSSHTSS-SVSSSPSQMDHHLERM 400
401 EEVPVQIPIMKSPLDKIQLTPGQ 423
                                   152 VAWTVEDPVDSAP-----PGQ 167
   92 RREQEVALERRNALFPEVFSPTPDENSDONSRSSSOASGITGSYSVSESPFFSPIHLHSN 151
  OTSUKA, KAORU
NAGAI, KEIICHI
IRIE, RYOTARO
   TAMECHIKA, ICHIRO
SEKI, NAOHIKO
YOSHIKAWA, TSUTOMU
  OTSUKA, MOTOYUKI
  ISONO, YURI
   YAMAMOTO, JUN-ICHI
ISONO, YUUKO
   NAGAHARI, KENJI
  Conservative
   6.9%;
  Score 78; DB . Pred. No. 11; 8; Mismatches
  32;
  Length 571;
  Indels
  14;
```

Gaps

Search completed: March Job time : 11.2381 secs 3, 2006, 14:19:06

```
Scoringitabile Origo
   OM protein - protein search, using sw model
  Word size :-
  Run on:
  Result
No.
  Sequence:
  Minimum DB seq length: 0
Maximum DB seq length: 200000000
  Post-processing: Listing first 500 summaries
  Total number of hits satisfying chosen parameters:
  Perfect score:
     2222011151112
222201116
2322001117
  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
   20.54
  Query
Match
  US-10-646-873-47
215
  March
  2443163 seqs, 439378781 residues
  1 MSPRHLSESSGKPLSTKQEA....
   100.
  A_Geneseq_21:*
1: geneseq_*
  Gapop 60.0 , Gapext 60.0
  100.0
   00
   100.0
  GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
  geneseQD1980s:*
geneseQD1990s:*
geneseQD2000s:*
geneseQD2001s:*
geneseQD2002s:*
geneseQD2003as:*
geneseQD2003bs:*
geneseQD2003bs:*
  geneseqp2005s:*

    2006, 14:18:31; Search time 77.679 Seconds
(without alignments)
    1216.113 Million cell updates/sec

  Length
   뮵
 AAM78590
ADA26379
ADN1717562
ADN297562
ADN97564
ADM79574
ADG73987
ABG60042
AAG73987
   AAW79676
AAE07319
   ADA26384
ADN17177
   AAW79681
AAE07324
   Ħ
   SUMMARIES
  ...HKNAMAERWESRIYASEEDD 215
   30
Aaw79681 Human CS1
Aae07324 Human CS
Ada26384 Synthetic
Adn17117 CS198 pro
Aaw79676 Human CS
Aaw79676 Human CS
Aaw78590 Human pro
Ada26379 Predicted
Adn1717 CS198 pro
Ada26379 Predicted
Adn1717 CS198 pro
Ada27562 Pancreati
Aam79574 Human NC2
Aag73987 Human NC2
Aag73987 Human GO1
Abo60042 Human GO1
Abo60042 Human GO1
Abo60042 Human GO2
Aae07320 Human CS
Ada26380 Synthetic
Aae07320 Human CS
Ada26380 Synthetic
Aae07322 Human CS
Ada26380 Synthetic
Ada17175 CS198 pep
Aaw79679 Synthetic
Ada17175 CS198 psp
Aaw79678 Synthetic
Ada17175 CS198 psp
Aaw79678 Synthetic
   Description
```

밁 S 밁 S

13

61 VMGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVABERRNALFPEVFSPTPDENSDQ 120 VWGWEVAGAPALRIQKSQSSDILERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ

MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH

60 60 0

| 7                                                          | SQ       | ž               | 38                         | ဂ္ဂ                      | ဌ                         | ය                               | ລຸຄ                            | 38                                  | 8                     | X S      | X :   | 9 P P :                                                                                                                                                             | ž X X          | Y PI           | 2 2 2                               | Y P S    | ¥ 🖁 i         | g X          | ž    | 8 X          | P ?          | 88      | ¥ <b>2</b>                     | <b>22</b>                          | <b>\$</b> B \$ | <b>1</b> 233 | <b>183</b> | RESUL<br>AAW79<br>ID                |            |                                                                                                           |                    |
|------------------------------------------------------------|----------|-----------------|----------------------------|--------------------------|---------------------------|---------------------------------|--------------------------------|-------------------------------------|-----------------------|----------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|-------------------------------------|----------|---------------|--------------|------|--------------|--------------|---------|--------------------------------|------------------------------------|----------------|--------------|------------|-------------------------------------|------------|-----------------------------------------------------------------------------------------------------------|--------------------|
| Query Ma<br>Best Loc<br>Matches                            | Sequence | COLLE           | gastric                    | condi                    | preve                     | used                            | gastr                          | is us                               | This                  | Claim    | Anort | New g                                                                                                                                                               | WPI;           | Rober          | Billing-I<br>Granados               | (ABBO    | 31-MAR-199    | 30-MA        |      | 08-00        | WO984        | Homo    | gastriti<br>pancreat           | Gastroint<br>human; pr             | Human          | 11-JAN-19    | AAW79681   | RESULT 1<br>AAW79681<br>ID AAW79681 |            | 26<br>27<br>28<br>30                                                                                      | 25                 |
| / Match<br>Local Similarity<br>nes 215; Conser             | nce 215  | TB, and         | tc utce                    | tions o                  | nting o                   | in dete                         | ointest                        | ed in a                             | sequence              | 26; Page | 0.000 | astroin<br>evelopi                                                                                                                                                  | 1998-542714/46 | Roberts-Rapp   | Billing-Medel<br>Granados EN,       | ) ABBOTT | R-1997;       | 0-MAR-1998;  |      | 08-OCT-1998. | WO9844159-A1 | sapiens | gastritis; le<br>pancreatitis. | ointestinal tract; predisposition; | Human CS198 p  | V-1999       | 581;       |                                     |            | 30031                                                                                                     |                    |
| larity<br>Conserva                                         | AA,      | <u>Pancrear</u> | r, gast                    | f the c                  | r treat                   | cting,                          | inal (G                        | method                              | e repre               | ge 103;  | 4     | testina<br>ng prod                                                                                                                                                  | 2714/46        | L, Ru          | PA,<br>Hayde                        | IT LAB.  | 97US          | OMB6         |      |              | •            | •       | eiomyom                        | inal tr<br>spositi                 | protein        | (first       |            | standard;                           |            | 14.4<br>14.0<br>14.0<br>14.0                                                                              | 4                  |
| 100<br>100<br>tive                                         |          | 301111          | RICIB                      | Itra                     | ing,                      | diagno                          | I) tra                         | 1 to 0                              | represents            | 127pp;   | 0     | l poly                                                                                                                                                              | •              | Russell        | , e                                 |          | 9708-00828855 | 8WO-US006251 | 1000 |              |              |         | a; pol                         | act; c                             | C-terminal     | entry)       |            | protei                              |            | 3 3 3 3 4                                                                                                 |                    |
|                                                            |          | 0               | , .<br>⊢                   | 1,0                      | H                         | 9                               | act i                          | 919                                 | the                   |          | į     | <b>E</b> 5 5                                                                                                                                                        |                | Ċ              | ĕ,ĕ                                 |          | 385           | 2            | ,    |              |              |         | ģ                              | ea.                                | ij.            | 3            |            | ein;                                |            | ω ο 4 Λ ο ω                                                                                               |                    |
| ; Score 215; DB 2; L; Pred. No. 3.3e-208; 0; Mismatches 0; |          |                 | гетошуота, ротурв, стоин п | such as GI tract cancer, | determining the predispos | ing, staging, monitoring,       | tract disorders. The methods a | e is                                | E the !               | English. |       | New gastrointestinal polynucleotides, CS198, and their of developing products for the diagnosis and treatment carerointestinal disorders e.g. cancers gastric ulcer |                | ;, stroupe su; | Fried<br>s MR,                      |          | 55.           | 1.           |      |              |              |         | в; Crohn's disease; ulcer      | treatment; Barret's oesophagus;    | nal.           |              |            | 215 AA.                             | ALIGNMENTS | ADM17174<br>AAW79680<br>AAB07323<br>ADA26383<br>ADM17176                                                  | ADA26381           |
| Length 215; Indels 0; Gaps 0                               |          |                 | discase, diccidence        | , Barrec's desopnagus,   | sition to diseases and    | g, monitoring, prognosticating, |                                | ger carso<br>useful as a marker for | n CS198 protein which |          |       | er detection - used nent of cer or dastritis.                                                                                                                       |                |                | man PN, Gordon J;<br>Kratochvil JD; |          |               |              |      |              |              |         | ative colitis;                 | ecti<br>gas                        | ٠              |              |            |                                     | •          | Adn17174 CS198 pep<br>Aaw79680 Synthetic<br>Aae07323 Human CS<br>Ada26383 Synthetic<br>Adn17176 CS198 pep | Ada26381 Synthetic |

```
ARESULT 2
ARESULT 2
AREOTER
AR
  맑
   Ş
   밁
The invention relates to a method of detecting the presence of a target CS 198 polynucleotide comprising contacting the test sample with at least one CS 198-specific polynucleotide. The method is useful for detecting diseases of the gastrointestinal (GI) tract organs, particularly cancer. The CS 198 polynucleotides, polypeptides and antibodies are useful for detecting, disgnosing, staging, monitoring, prognosticating, preventing, treating or determining predisposition to diseases and conditions of the GI tract such as cancer, gastrit ulcer, gastritis, Crohn's disease, ulcerative colitis, pancreatitis and Barret's oesophagus. The CS 198 polypeptides are useful as standards or reagents in diagnostic immunoassays, as components or as target sites for various therapies. Antibodies directed against at least one epitope contained within these polypeptides are useful as delivery agents for therapeutic agents, in
   (COLP/)
(COHE/)
   CS 198; gastrointestinal tract disease; GI tract; cancer; gastric ulcer; gastritis; Crohn's disease; ulcerative colitis; pancreatitis;. Barret's oesophagus; gene therapy; drug screening; human.
   Claim 17; Page 52-53; 68pp; English.
  Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, comprise contacting test sample with at least one CS 198-specific polynucleotide.
  WPI; 2001-496163/54.
   Granados EN,
   Billingel PA,
  30-MAR-1998;
  02-AUG-2001.
  US2001010904-A1
   Homo sapiens.
   Human CS 198
  06-NOV-2001
  AAE07324 standard; protein;
   Roberts-Rapp L,
   (HAYD/)
(HODG/)
(KLAS/)
  (FRIE/)
(GORD/)
(GRAN/)
  (ROBE/)
   KRAT/)
  181
   181
   121
   121
  COLPITTS T L.
FRIEDMAN P N.
GORDON J.
GRANADOS E N.
HAYDEN M.
HODGES S C.
   ROBERTS-RAPP I
RUSSELL J C.
STROUPE S D.
  BILLINGEL P A.
   KLASS M R.
   COHEN
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  oesophagus; gene therapy; drug screening; human.
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   , Cohen M,
Hayden M,
L, Russell
  protein C-terminal portion
  (first entry)
   97US-00828855
  98US-00050516.
  Colpitts TL, Friedman
Hodges SC, Klass MR,
JC, Stroupe SD;
  215
  ₽
  Friedman
  215
  PN, Gordon J;
Kratochvil JD;
  target
at least
  comprises
  180
```

```
ADA263 ADA264 ADA264 ADA263 ADA263 ADA264 ADA264 ADA264 AC ADA264 
   ð
  밁
  δ
  문
  Ś
  밁
   ð
  នន្តន្តន្តន្តន្ត្
  Query Match
Best Local Sim
Matches 215;
   diagnostic tests and for screening for conditions or diseases associated with CS 198, particularly cancer. Monoclonal antibodies may also be used for the generation of chimeric antibodies for therapeutic use. The CS 198 polynucleotide is also useful in gene therapy and drug screening. The method of the invention provides an alternative, non-surgical diagnostic method capable of detecting early stage GI tract disease such as cancer. The present sequence is C-terminal portion of human CS 198 polypeptide
  CS198; cancer diagnosis; cancer staging; cancer monitoring; cancer prognosticating; cancer prevention; cancer; gastrointestinal tract disorder; gene therapy.
  (BILL/)
(COHE/)
(COLP/)
(FRIE/)
(GORD/)
   Sequence 215 AA;
                        Billingel PA,
Granados EN,
   31-MAR-1997;
30-MAR-1998;
  23-OCT-2002; 2002US-00278547
   US2003082619-A1.
  20-NOV-2003
   ADA26384;
  ADA26384 standard; protein; 215
   (HAYD/)
   (ROBE/)
  (KRAT/
  (KLAS/)
   (HODG/)
  (GRAN/)
  181
   181
  121
   121
  61
   61
  μ
   GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
KLASS M R.
   KRATOCHVIL J I
ROBERTS-RAPP I
RUSSELL J C.
STROUPE S D.
   Similarity
   COHEN
  BILLINGEL
  COLPITTS T L. FRIEDMAN P N.
  VMGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 120
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  NSRSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
  VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   (first entry)
  Conservative
, Cohen M,
Hayden MA,
L, Russell
   98US-00050516
  97US-00828855
  ש
   based
  100.0%;
   8
Colpitts TL,
Hodges SC,
JC, Stroupe
   CS198
  0,
  Score
Pred.
  ₽
   Mismatches
   protein
  215; DB 4;
No. 3.3e-208;
  Friedman
Klass MR,
SD;
   #5
   0
                           PN, Gordon
Kratochvil
   Length
   Indels
                           g;
  0,
   Gaps
   180
   120
   60
```

Roberts-Rapp

ŗ

```
RRSULT 4
ADMIT 17
ID ADMIT 17
ID ADMIT 17
XX ADMIT 17
XX Gast XX Gast XX Gast XX Gast XX Unic 
   XEXEFFEXEXONNONNONNONN
   밁
   ঠ
  S
   ₽
   ફ
   ঠ
  유
   밁
   Query Match
Best Local S
Matches 215
   CS198 polynucleotide in a test sample. The method comprises contacting the test sample with at least one CS198 specific polynucleotide or its complement, and detecting the presence of the target CS198 polynucleotide in the test sample, where the CS198-specific polynucleotide has at least 10% identity to a polynucleotide having any of the 27 fully defined sequences of 34-2894 bp (S1-27) given in the specification, or their fragments or complements. The composition and methods are useful in diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition of an individual to, diseases and conditions of the gastrointestinal tract, e.g. cancer and in gene therapy. This is the amino acid sequence of a synthetic peptide based on the predicted human CS198 protein sequence derived from the CS198 consensus sequence shown in seq id 27.
  Detecting the presence of a target CS198 polynucleotide in a test sample comprises contacting the sample with a CS198 specific polynucleotide and detecting the presence of the target CS198 polynucleotide in the test
  Sequence 215 AA;
   Claim 52;
   WPI; 2003-596961/56
   Gastrointestinal tract; GI tract; CS198; cancer; gene therapy
   17-JUN-2004
  ADN17177 standard;
  31-MAR-1997;
30-MAR-1998;
   US2004043406-A1.
  Unidentified
   CS198 protein
   ADN17177;
  22-AUG-2003; 2003US-00646873
  (BILL/) BILLINGEL P
(COHE/) COHEN M.
  invention
   181
   181
  121
   121
   61
   61
   215;
  _
  Similarity
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPFGQRKKEQWYAGINFS
   VWGWEVAGAPALRLOKSOSSDLLERERESVLRREQEVAEERRNALFPEVFSFTPDENSDQ
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRPRAPDEPQQAQVPH
  vwgwevagapalriqksqssdliereresvirreqevaeerrnalfpevfsptpdensdq
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKXEQWYAGINPS
  Page 52; 67pp; English
  Conservative
   (first
  describes
   97US-00828855
98US-00050516
   protein;
   entry)
  100.0%;
  a method of detecting the presence of a target a test sample. The method comprises contacting
   0
   215
   Score 215; DB 6; 1
Pred. No. 3.3e-208;
; Mismatches 0;
   8
  215
   Length 215;
   Indels
   0,
   Gaps
   180
   180
   120
   120
  60
   60
   0
```

```
ARRESULT 5
ARAW79676
ID AAW70
XX AAW7
XX AAW7
XX 11-J
DT 11-J
XX XX
DE Huma
XX Gast
XW Gast
KW Gast
  S
  뭉
   문
   Ś
   밁
  밁
   5
  Query Match
Best Local Similarity
  Matches
  The invention relates to reagents and methods for detecting diseases of the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polynucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of diseases or conditions associated with a pervention and/or treatment of theseses or conditions associated with the present expression or activity of the CS198 polypeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 protein used to illustrate the method of the
  Diagnosing diseases such as cancer of the detecting aberrant expression or activity associated treatment methods.
  (COLP/)
(FRIE/)
(GORD/)
(GRAN/)
                                      Gastrointestinal tract; GI tract; cancer; disease; detection; (human; predisposition; treatment; Barret's oesophagus; gastric gastritis; leiomyoma; polyps; Crohn's disease; ulcerative coli
  Sequence
   Claim 17; SEQ
  WPI; 2004-313754/29
  Roberts-Rapp L,
  Granados EN,
   Billingel
   (HODG/)
   11-JAN-1999
  AAW79676 standard;
  (STRO/)
  (HAYD/
                           pancreatitis.
  Human CS198
  invention.
  KRAT/
   ROBE/
   121
   181
   181
  121
   215;
  51
  5
   _
  _
   HAYDEN M A.
HODGES S C.
KLASS M R.
KRATOCHVIL J I
ROBERTS-RAPP I
RUSSELL J C.
STROUPE S D.
  COLPITTS
FRIEDMAN
  215
   GRANADOS E N.
   GORDON
   NSRSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  VWGWEVAGAPALRLOKSOSSDLLERERESVLRREQEVABERRNALFPEVFSPTPDENSDQ
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
  VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVABERRNALFPEVFSPTPDENSDQ
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  PA,
   DGINSEVLEAIRVIRHKNAMAERWESRIYASEEDD
  protein
   Conservative
  , Cohen M,
Hayden MA,
L, Russell
  ₹
   (first
   ID NO 47; 67pp; English
  ъΗ
  ZĽ
  protein;
   entry)
  100.0%;
   ۲.
  Colpitts TL,
Hodges SC,
JC, Stroupe
   0
  Score 215; DB 8;
Pred. No. 3.3e-208;
D; Mismatches 0;
   Friedman
Klass MR,
SD;
   gastrointestinal tract, by of the CS198 polypeptide,
  215
  Indels
   Length
   N, Gordon
Kratochvil
  215;
  <u>.</u>.
  Gaps
  Ã
  180
  120
   120
   8
   60
```

0;

Homo sapiens

```
AREOTIT 6
AAEOTIM
ID AAEO
XX AAEOT
AC AAEO
XX AAEOT
XX AAEOT
XX AAEOT
XX AAEOT
XX AAEOT
XX BAET
XX BAE
   δ
  밁
   8
   밁
   र्
  밁
  ঠ
   밁
   Matches
   Query Match
Best Local (
   This sequence represents the human CS198 protein which is used in a method to detect the presence of a target CS198 polymucleotide in a test sample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be used in detecting, diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oesophagus, gastric ulcer, gastritis, lelomyoma, polyps, Crohn's disease, ulcerative colitis, and
  New gastrointestinal polymucleotides, CS198, and their detection - for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastrit;
  Homo sapiens
   CS 198; gastrointestinal tract disease; GI tract; cancer; gastritis; Crohn's disease; ulcerative colitis; pancreatitis; Barret's oesophagus; gene therapy; drug screening; human.
  Human CS 198
   06-NOV-2001
  AAE07319 standard;
   Sequence
   pancreatitis
  Claim
   WPI;
  Roberts-Rapp L,
  Granados EN,
  Billing-Medel PA,
  30-MAR-1998;
   08-OCT-1998.
   WO9844159-A1
   (ABBO ) ABBOTT LAB.
   1998-542714/46
  585
   181
  121
   525
   465
   215;
   26; Page 100-102; 127pp; English.
   61
   μ
  Similarity
   679
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
  NSRSSSQASGITGSYSVSESPPFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVABERRNALFPEVFSPTPDENSDQ
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  100.0%;
ilarity 100.0%;
Conservative (
   protein
   ₽,
   (first entry
  PA, Cohen M, Colpitts TL,
Hayden M, Hodges SC, Klass
L, Russell JC, Stroupe SD;
  97US-00828855
  98WO-US006251
  Location/Qualifiers
  protein; 679
   0
  Score 215; DB 2; Pred. No. 9.1e-208;
  ₿
  Mismatches
  ₹,
  Friedman PN,
  679
   ٥,
   Kratochvil JD;
   Length 679;
  Indels
  Gordon
  gastric ulcer;
  gastritis
   0;
  Gaps
  4
   644
   180
  584
   120
   524
  60
```

유정

61

120

```
밁
                           S
  The invention relates to a method of detecting the presence of a target CC S198 polymucleotide comprising contacting the test sample with at least CC one CS 198 specific polymucleotide. The method is useful for detecting CC diseases of the gastrointestinal (GI) tract organs, particularly cancer. CC The CS 198 polymucleotides, polypeptides and antibodies are useful for CC treating, diagnosing, staging, monitoring, prognosticating, preventing, cc treating or determining predisposition to diseases and conditions of the CC GI tract such as cancer, gastric ulcer, gastritis, Crohn's disease, CC ulcerative colitis, pancreatitis and harrer's oseophagus. The CS 198 CC polypeptides are useful as standards or reagents in diagnostic cc immunoassays, as components or as target sites for various therapies. CC Antibodies directed against at least one epitope contained within these CC diagnostic tests and for screening for conditions or diseases associated with CS 198, particularly cancer. Monoclonal antibodies may also be used CC with CS 198, particularly cancer. Monoclonal antibodies may also be used CC polymucleotide is also useful in gene therapy and drug screening. The CC method of the invention provides an alternative, non-surgical diagnostic CC method capable of detecting early stage GI tract disease such as cancer. The present sequence is human CS 198 polypeptide
   Matches
  Query Match
   Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, contacting test sample with at least one CS 198-specific polynucle
   (COLP/)
(FRIE/)
(GORD/)
(GRAN/)
  Misc-difference 353
  Sequence 679 AA;
   N-PSDB;
   Billingel PA,
Granados EN,
   (KLAS/)
(KRAT/)
(ROBE/)
  Claim 17; Page 49-51; 68pp; English.
   Roberts-Rapp L,
   31-MAR-1997;
  (HODG/
   (HAYD/)
  30-MAR-1998;
  (COHE/)
   ocal
  2001-496163/54.
DB; AAD13637.
   215;
 465
                   1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRPRAPDEPQQAQVPH
   HAYDEN M.
HODGES S C.
KLASS M R.
KRATOCHVIL J
ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
  COLPITTS T L. FRIEDMAN P N. GORDON J. GRANADOS E N.
   Similarity
  BILLINGEL P A.
  COHEN
   Conservative
   , Cohen M,
Hayden M,
L, Russell
   97US-00828855
   98US-00050516
  note= "Encoded by CGGN"
 SGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   100.0%;
  r o
   Colpitts TL, Friedma
Hodges SC, Klass MR,
JC, Stroupe SD;
   0;
   Score 215; DB 4;
Pred. No. 9.1e-208;
; Mismatches 0;
   Friedman
   PN,
   PN, Gordon J;
Kratochvil JD;
  Length 679;
  Indels
   Gordon
  polynucleotide.
   0
   Gaps
   comprises
   524
                                60
```

Ś . 당 δ 밁 S 밁 5

0

```
밁
  S
  밁
   8
Query Match
Best Local Similarity
   03-FEB-2000;
27-APR-2000;
20-JUN-2000;
  The invention relates to polynucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoiesis regulating activity, tissue growth factor activity, immunomodulatory activity and activiny inhibin activity and may be useful in the diagnosis and/or restrict the coll growth factor activity in the diagnosis and/or restrict the coll growth factor activity in the diagnosis and/or restrict the coll growth factor activity in the diagnosis and/or restrict the coll growth factor activity in the diagnosis and/or restrict the collection of the collection o
  Human, cytokine; cell proliferation; cell differentiation; gene th vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorder; arthritis; inflammation.
   06-NOV-2001
   AAM78590;
   AAM78590 standard;
  Human protein SEQ ID NO 1252
   WPI; 2001-476283/51.
N-PSDB; AAK51723.
   WO200157190-A2
  Homo sapiens
  treatment of cancer, leukaemia, nervous system disorders, arthritis and inflammation. Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666 (AAM80020) are omitted as the relevant pages from the
   Claim
   Nucleic acids encoding polypeptides with cytokine-like in diagnosis and gene therapy.
   Xue AJ,
   05-FEB-2001; 2001WO-US004098
   Sequence
  15-SEP-2000;
20-OCT-2000;
  01-SEP-2000;
  (HYSE-) HYSEQ INC.
  YT,
   645
  585
  181
  121
   20; Page 3512-3514; 6221pp; English
   Zhao QA,
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  679
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   listing
  Liu C,
  2000US-00620325.
2000US-00654936.
2000US-00663561.
2000US-00693325.
2000US-00728422.
   ξ
   (first entry)
   2000US-00560875.
2000US-00598075.
  2000US-00496914.
  Drmanac RT,
Wang D, Wang
   were
   Wejhrman
   protein; 679
  100.0%;
   missing at the
   Ή
  Score
Pred.
   Asundi V, Zh
y J, Zhang J,
Goodrich R;
   ξ
  215; DB 4;
No. 9.1e-208;
   time
   of publication
   Zhou P,
  215
   679
  Ren F,
                      Length
   Xu C,
   Chen
   activities,
                        679;
   ,
,
   Cao
  gene therapy;
   Wang
   ۲
  useful
   ZW;
  180
   644
  ç
```

```
Matches
Detecting the presence of a target CS198 polynucleotide in a test sample comprises contacting the sample with a CS198 specific polynucleotide and detecting the presence of the target CS198 polynucleotide in the test
  cancer prognosticating; cancer pagestrointestinal tract disorder;
  CS198; cancer diagnosis; cancer staging; cancer monitoring; cancer prognosticating; cancer prevention; cancer;
  ADA26379 standard; protein; 679
  Billingel PA
Granados EN,
   US2003082619-A1
  Synthetic;
  Predicted
   20-NOV-2003
   ADA26379;
   WPI; 2003-596961/56
  Roberts-Rapp
  (GRAN/
(HAYD/
   (COHE/)
   31-MAR-1997;
  23-OCT-2002; 2002US-00278547.
  01-MAY-2003
  30-MAR-1998;
   (KRAT
   (KLAS)
  GORD/
  (FRIE/
   HODG/
  COLP/
   585
  525
   465
   645
   181
  121
  215;
   19
  1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  COLPITTS T L.
FRIEDMAN P N.
GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
   KLASS M R.
KRATOCHVIL J I
ROBERTS-RAPP I
RUSSELL J C.
STROUPE S D.
  COLPITTS
   BILLINGEL
  VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  vwgwevagapalrioksossdilereresvirreoevaeerrnalfpevfsptpdensdo
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   PA,
  amino
  Conservative
  ŗ
  , Cohen M,
Hayden MA,
L, Russell
   (first entry)
   97US-00828855.
98US-00050516.
  acid
  ש
  sequence
  Colpitts TL,
Hodges SC,
JC, Stroupe
  0
  of the CS198
   Ş
  Mismatches
  gene therapy.
   Friedman
Klass MR,
SD;
  protein
  679
   0,
   PN, Gordon
Kratochvil
   Indels
   0
   Gaps
  524
  644
   180
   584
   120
  60
```

The invention describes a method of detecting the CS198 polynucleotide in a test sample. The method

presence of a target comprises contacting

Claim 17;

Page

49-50; 67pp;

English

```
ADM1717 9
ADM17172
ID ADM17171
XX ADM17
AC ADM1
XX ADM1
DT 17-J
DE CS19
XX Gast
XX Gast
XX US20
XX US20
XX US20
XX US20
XX Gast
XX Gas
  δ
   밁
   ঠ
  문
  S
  맑
   S
  8888888888888888
   Query Match
Best Local
  Matches
   the test sample with at least one CS198 specific polynucleotide or its complement, and detecting the presence of the target CS198 polynucleotide in the test sample, where the CS198-specific polynucleotide has at least sequences of 34-2894 bp (S1-27) given in the specification, or their fragments or complements. The composition and methods are useful in diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition of an individual to, diseases and conditions of the gastrointestinal tract, e.g. cancer and in gene therapy. This is the predicted amino acid sequence of the human CS198
    Billingel
   (BILL/)
(COHE/)
(COLP/)
(FRIE/)
(GORD/)
(GRAN/)
  31-MAR-1997;
30-MAR-1998;
   22-AUG-2003;
  04-MAR-2004
  US2004043406-A1
   Unidentified
  Gastrointestinal
   CS198 protein
   17-JUN-2004
   ADN17172;
  ADN17172 standard; protein; 679
  protein derived from the CS198 consensus sequence shown in seq id 27
   (KRAT/)
(ROBE/)
(RUSS/)
  (HAYD/)
(HODG/)
(KLAS/)
   645
   585
   121
  525
  181
   465
   215;
  61
   1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   COHEN M.
COLDITIS T L.
FRIEDMAN P N.
GRANADOS E N.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
KLASS M R.
KRATOCHYLL J D.
ROBERTS-RAPP L.
RUSSELL J C.
  Similarity
  BILLINGEL P
   679
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   VWGWEVAGAPALRLOKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
       PA,
   Conservative
   2003US-00646873
  Ŗ,
   (first
  #
  97US-00828855.
98US-00050516.
       Cohen
  8 C.
  tract; GI tract; CS198; cancer; gene therapy.
   ×
   entry)
   100.0%;
    Σ,
   ۲۵
       Colpitts
   0
   Score 215; DB 6; Pred. No. 9.1e-208;
  A
  Mismatches
TL,
       Friedman
  215
   679
   <u>.</u>
       PN,
   Length 679;
   Indels
   CS198 polynucleotide
       Gordon
   0;
       Ç,
   Gaps
   180
   644
  584
  120
   524
```

RESULT 10
ADX97562
ID ADX977
XX ADX97
AC ADX97
AC ADX97
XX PANCX
XX PANCX
XX PANCX
XX PANCX
XX PANCX
XX PANCX
XX FF BA FF 31-MA
XX HINZ
PA (ROSE
PA (SPEC
PA

ADX97562 standard; protein; 692

cancer associated

human

protein,

SEQ Ħ

cytostatic.

(first entry)

27-OCT-2004. EP1471075-A2 Homo sapiens. pancreas tumor; Pancreatic 21-APR-2005

(ROSE/) (PILA/) (DAHL/) (SPEC/)

DAHL E. SPECHT T.

PILARSKY C.

LICHTNER R

(/ZNIH)

HINZMANN B. ROSENTHAL A

31-MAR-2003; 2003DE-01015834

31-MAR-2004; 2004EP-00090124

```
S
   片
  S
   밁
   Ś
  밁
   Ś
  SXCCCCCCCCX BX PPTX RXXX PTTX RXXX PTX RXXX PTTX RXXX PTTX RXXX PTX RXXX PT
  Query Match
Best Local Similarity
Matches 215; Conserv
  the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polynucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of diseases or conditions associated with aberrant expression or activity of the CS198 polypeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 protein used to illustrate the method of the
   Diagnosing diseases such as cancer of the gastrointestinal tract, by detecting aberrant expression or activity of the CS198 polypeptide, associated treatment methods.
   Granados EN,
Roberts-Rapp
   Sequence 679
  The invention relates to reagents and methods for detecting diseases of
   Claim 17; SEQ ID
  GENBANK;
  invention.
  2004-313754/29.
NK; D87440.
645
   181
   585
  121
  525
   465
  61
   ۳
   VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 120
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDBPQQAQVPH
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
   Conservative
  Ā
   Hayden MA,
L, Russell
   NO 42; 67pp; English
   100.0%;
   Hodges SC,
JC, Stroupe
   0
   Score 215; DB 8; Pred. No. 9.1e-208; Mismatches 0;
   Klass
SD;
   ₩
   Length
   Kratochvil
   Indels
   679;
   JD;
   <u>,</u>
   Gaps
  γď
   and
   524
   60
  644
  584
```

```
RESULT 11
AAM79574
  밁
  문
   S
밁
   S
  S
  밁
  ঠ
  treatment of pancreatic cancer, using a substance that inhibits or binds to the protein or its DNA, including: an antisense oligonucleotide, short interfering RNA or ribozyme directed against the pancreatic protein, an organic molecule, particularly having a molecular weight below 5000, especially 300, that binds to the pancreatic DNA, an aptamer or (monoclonal) antibody, preferably human or humanized, that binds to the pancreatic DNA, an aptamer or pancreatic DNA, or an anti-diotypic antibody raised against the monoclonal antibody, any of which may be derivatized with a reporter group, cytocoxic compound, immunostimulant and/or radioisocope. The novel human pancreatic proteins and their encoding DNA have cytostatic activity. The novel sequences are useful for inhibiting transcription and/or expression of genes and proteins associated with pancreatic cancer. This sequence represents one of the novel human pancreatic proteins of the invention. Note: This sequence is not shown in the specification, it has been electronically downloaded from a DVD-rom provided with this specification by the European Patent Office.
   Query Match
Best Local Similarity
  Matches
 Homo sapiens
   pancreas and its encoded protein. The invention further comprises: proteins and peptides, preferably isolated, that contain a sequence encoded by the novel nucleic acid; and methods for diagnosis and
   Claim 2; SEQ ID NO 110; 28pp; German
  New nucleic acid differentially expressed use as diagnostic agents and in screening
   Rosenthal A, Lichtner R,
   Human; cytokine; cell proliferation; cell differentiation; gene therapy; vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorder; arthritis; inflammation.
   Sequence 692 AA;
  The invention relates
  WPI, 2004-768082/76
   06-NOV-2001
   AAM79574 standard; protein; 672
  Human
  865
  538
  658
   181
  121 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  478
  61 VMGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSFTPDENSDQ 120
  215;
  protein
  1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDBPQQAQVPH
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
  VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 692
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   100.0%; ilarity 100.0%; Conservative 0
   (first entry)
   Staub
   Pilarsky
Staub E,
  SEQ
  IJ
  NO 3220.
  ç
   C, Dahl E,
Roepcke S,
  a novel human nucleic acid sequence
  0
  Score 215; DB 8; Pred. No. 9.3e-208; Mismatches 0;
   ₹
   Specht T,
Li X;
  in pancreatic tumor tissue, for therapeutic agents.
   Bruemmendorf T;
   Length
  Indels
   692;
  <u>.</u>
  o
H
  the
  Gaps
   180
  537
   60
  for
  657
  597
  0
```

```
RESULT 12
ADG14341
   PIXRXPR
  RXGXFXRR
   PRESERVE
******
   S
   밁
  ঠ
  밁
  S
   밁
  Matches 177;
   Best Local
   Query Match
   03-FEB-2000; 2000US-00496914.
27-APR-2000; 2000US-00560875.
20-JUN-2000; 2000US-00598075.
19-UL-2000; 2000US-00620325.
01-SEP-2000; 2000US-00634936.
15-SEP-2000; 2000US-00693325.
20-CCT-2000; 2000US-00693325.
30-NOV-2000; 2000US-00728422.
  production of other cytokines in other cell populations. The production of other cytokines in other cell populations. The polymucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoises regulating activity, tissue growth factor activity, immunomodulatory activity and activin/inhibin activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and inflammation. Note: Records for SEQ ID NO 2110 (AAKS2581), 2111 (AAKS2582) and 3666 (AAM80020) are omitted as the relevant pages from the sequence listing were missing at the time of publication
  Tang
Ma Y,
   The invention relates to polynucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce
  Nucleic acids encoding polypeptides with cytokine-like activities, useful in diagnosis and gene therapy.
  05-FEB-2001; 2001WO-US004098
   09-AUG-2001.
  WO200157190-A2
   Claim 20;
   N-PSDB; AAK52707.
  WPI; 2001-476283/51.
  Sequence 672
   Xue AJ,
   ADG14341 standard; protein;
  (HYSE-) HYSEQ INC
  26-FEB-2004
   ADG14341
  y YT, Liu C,
Y, Zhao QA, Y
AJ, Yang Y,
   578
   121 NSRSSSQASGITGSYSVSBSPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGI 177
   518
  458
   61 VWGWEVAGAPALRIQKSQSSDIJERERESVIRREQEVAEERRNALFPEVFSPTPDENSDQ 120
  1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   Similarity
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGI
   VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVABERRNALFPEVFSPTPDENSDQ
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRPRAPDEPQQAQVPH
   Page 288; 6221pp; English
   QA, Wang D,
Y, Wejhrman T
  Conservative
   ₽,
  (first entry
   Drmanac RT, ...
ang D, Wang J
  82.3%; Score 177;
100.0%; Pred. No.
  0;
  679
   Asundi V, Zh
g J, Zhang J,
Goodrich R;
  Mismatches
  ₿
   DB 4;
2e-169;
   Zhou
   Ren
   0
   ۵,
   Length 672
   ্দ্ৰ
   ž
   chen
   R,
   0
   Y;
Wang
   Gaps
  634
  , wz
   577
  517
   60
  ç
   0
```

Human; NC1; NC2; NC3; PHHI; pancreas beta-cell; insulin; antidiabetic;

Human NC2

```
RESULT 13
AAG73987
ID AAG73
XX AAG73
XX AAG73
XX AAG73
XX AAG73
XX DE Humar
XX W Golo;
XX WO20
  S
  Ş
  밁
  ₽
  र्
  Query Match
Best Local (
   Matches 170;
  differentiation and proliferation of such cells and their precursors as analogous cells in treatment of e.g. pHHI and diseases due to differentiation/proliferation abnormality, diseases of the nervous system and pancreas. The coding sequences are also useful as spontaneous proliferation models of pancreas beta-cells. The novel genes NC1, NC2 and NC3 were isolated from the pancreas of PHHI patients, which were used in testing for the detection of proliferative insulin-producing cells or
                   WO200122920-A2
  Homo sapiens.
  colorectal carcinoma
  Human; colon cancer; colon
  Human colon cancer antigen protein SEQ ID NO:4751
   03-SEP-2001
   AAG73987 standard; protein; 172 AA
  Sequence
   pandreas beta-dells by Northern analysis.
   The present invention relates to human NC1, NC2 and NC3 proteins and coding sequences (ADG14340-ADG14345). The coding sequences are useful detecting and screening proliferative insulin-producing cells as well
   Claim 1; SEQ ID NO 2; 34pp; Japanese.
   Pamilial persistent hyperinsulinemic hypoglycemia of infancy (PHHI) patient-expressed genes for detecting and screening e.g. proliferative insulin-producing cells in treatment of PHHI.
   Niwa H,
   15-MAR-2002; 2002JP-00071592
   06-MAR-2003; 2003WO-JP002620.
  25-SEP-2003
   WO2003078631-A1
   Homo sapiens.
   neuroprotective
  (KANF ) KANEKA CORP
   2003-767524/72.
  121
   525
  465
   61
   ۳
   Similarity
   ADG14344.
  Yamashita K;
  VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  679 AA;
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKK 170
   VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKK
   79.1%;
llarity 100.0%;
Conservative (
   (first entry)
  cancer antigen; diagnosis; detection;
   <u>.</u>
   Score 170; DB 7; Lo
Pred. No. 2.4e-162;
0; Mismatches 0;
   Length 679;
   Indels
   634
   0
   Gaps
   120
   584
   524
   60
   for
   0
```

```
RESULT 14
ABO6042
ID ABO60
XX ABO60
XX ABO60
XX Human
XX Human
XX Human
XX Homo
OS Homo
OS Homo
XX US200
XX 16-OC
PP 03-AF
XX YA
PA (PENN
  밁
  á
  CC cancer antigens have cytostatic activity and can be used in gene therapy CC and vaccine production. N and P may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate P expression. For CC example, N and P may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate P expression. For CC example, N and P may be used to treat disorders associated with decreased CC expression by rectifying mutations or deletions in a patient's genome CC supplement the patients own production of P. Additionally, N may be used to produce the colon cancer-associated Ps, by inserting the nucleic acids into a host cell and culturing the cell to express the proteins. N and P CC can be used in the prevention, diagnosis and treatment of colorectal CC carcinomas and cancers. AAH37196 to AAH37204 and AAB77789 represent CC sequences used in the exemplification of the present invention. N.B. C pages 666 to 682 and page 7053 of the sequence listing were missing at the color and page 7053 and 7027 a
  Matches
  Query Match
   Nucleic acids encoding 4277 human colon cancer-associated polypeptides, useful for preventing, diagnosing and/or treating colorectal cancers.
   N-PSDB; AAH33418
  WPI; 2001-235357/24.
   29-SEP-1999;
03-NOV-1999;
   05-APR-2001.
   03-APR-2002; 2002US-00029386
  03-APR-2002; 2002US-00029386.
   US2003194704-A1
   Homo sapiens
  Human; gene expression; single exon alternative splicing event; genomic
  Human genome derived single exon protein #6276
   29-JUL-2004 (first entry)
   ABO60042 standard; protein; 43
  Sequence 172 AA;
   time of publication, muto 1052, 7921 and 7922
   AAH32943 to AAH37195 and AAG73514 to AAG77788 represent human colon
  Claim 11; Page 6550-6551; 9803pp;
   28-SEP-2000; 2000WO-US026524
  16-OCT-2003
  (HUMA-) HUMAN GENOME SCI INC
  Local Similarity hes 60; Conserv
  56
   99
   EERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVED 158
  EERRNALFPEVFSPTPDENSDONSRSSSOASGITGSYSVSESPFFSPIHLHSNVAWTVED
   Barash SC,
  Conservative
   99US-0157137P.
99US-0163280P.
  27.9%; but
100.0%; Prr
   Birse
  Score 60; DB; Pred. No. 7.1
0; Mismatches
   Ĝ
  8
   English.
   Rosen CA;
   probe; microarray;
alteration.
  DB 4; Le . 7.1e-52; ches 0;
  Length 172;
  Indels
  <u>.</u>
  Gaps
```

(PENN/) PENN S

```
cc measuring human gene expression, a vector comprising the single exon cc probe cited above, an ORF-encoded peptide comprising the single exon cc contiguous amino acids of any of the above- mentioned amino acid contiguous amino acids of any of the above- mentioned amino acid contiguous amino acids of any of the above- mentioned amino acid contiguous amino acids specifically to a peptide cited above, conservative amino acid substitutions), an isolated antibody that binds specifically to a peptide cited above, contains and accomputer-readable contains and accomputer-readable storage medium which contains a database having a plurality of records (each record including data on the expression, a method of providing contains a database having a plurality of records (each record including data on the expression of a single exon probe cotted above. The probe, methods and apparatus are useful in gene contains to detect the presence of expression of a single exon probe contains the probes may be used as tools for surveying contained to detect the presence of expressed messages that contain their constructing genome-derived single exon microarrays. In addition, the probes are used in identifying and characterising alterations in the genomic locus that includes their exon, in assessing smaller genomic alterations, in priming the synthesis of nucleic acids, or in expressing the ORF-encoded peptide. The present sequence is a human contained in electronic format directly from USPTO at sequence data for obtained in electronic format directly from USPTO at sequence and approximated specification, but was equal and contained in electronic format directly from USPTO at sequence and approximated specification, but was contained in electronic format directly from USPTO at
RESULT 15
AAW79677
ID AAW79
XX AAW79
AC AAW79
XX I1-JJ
XX Synth
XX Synth
XX Gasti
KW humar
   밁
   ફ
   Query Match
Best Local S
Matches 43
   sequences in the specification, or their complements or fragments, and encoding at least 8 amino acids of any of the 6888 amino acid sequences fully defined in the specification. The probe is a single exon probe that hybridises under high stringency conditions to a nucleic acid molecule expressed in human cells or tissues. Also included are a spatially-addressable set of single exon nucleic acid grobes for measuring human gene expression (comprising a plurality of single exon nucleic acid grobes is separately and addressably isolatable or amplifiable from the plurality), a single exon microarray for measuring human gene expression, a method of
   Claim 45; SEQ ID NO 33676; 80pp; English
  gene expression analysis, for identifyi splicing events, for assessing genomic
   New human genome-derived single exon nucleic acid probes useful for human gene expression analysis, for identifying or characterizing alternative splicing events, for assessing genomic alterations or as tools for
  WPI, 2004-119264/12.
  Penn SG,
   expression,
   The invention relates to
  (RANK/) RANK D R. (HANZ/) HANZEL D K.
  Gastrointestinal tract; GI tract; cancer; disease; detection; CS198; human; predisposition; treatment; Barret's oesophagus; gastric ulcer
   Sequence
   Synthetic CS198 derived peptide
   11-JAN-1999
  AAW79677 standard; protein; 36 AA
  131 ITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQW 173
   μ
  43, Conserv
   43
  Rank DR,
   ITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQW 43
  comprising any of the 27,400 fully defined nucleotide
  Conservative
   ξ,
   (first entry)
   Hanzel
  20.0%;
   묫
  nucleic acid probe for measuring human gene
  °,
  Score 43;
pred. No.
   #1
  Mismatches
   DB 8;
  8; Length 43
   <u>.</u>
   Indels
    gastric ulcer,
  0
   Gaps
   0
```

```
RESULT 16
AAE07320
   맑
  S
Query Match
Best Local S
Matches 36
   New gastrointestinal polynucleotides, CS198, and their detection for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastriti
  gastritis; leiomyoma; polyps; Crohn's disease;
pancreatitis.
   Billing-Medel 
Granados EN,
   30-MAR-1998;
  08-OCT-1998
  CS 198; gastrointestinal tract disease; GI tract; cancer; gas
gastritis; Crohn's disease; ulcerative colitis; pancreatitis;
Barret's oesophagus; gene therapy; drug screening; human.
  used in detecting, diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oesophagus, gastric ulcer, gastritis, leiomyoma, polyps, Crohn's disease, ulcerative
   AAW79677-W79680 are synthetic CS198 derived peptide fragments which are used in a method to detect the presence of a target human CS198 polynucleotide in a test sample. The CS198 gene is useful as a marker fogastrointestinal (GI) tract disorders. The methods and products can be
  Claim 26; Page 102; 127pp; English.
  Roberts-Rapp L,
   31-MAR-1997;
   Sequence 36
  Human CS 198
   06-NOV-2001
   AAE07320
  AAE07320 standard; peptide; 36
   colitis,
   (ABBO ) ABBOTT LAB
   30-MAR-1998;
  02-AUG-2001
  US2001010904-A1
  Homo sapiens
   _
  1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
  Similarity
   and pancreatitis
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR
  A,
  16.7%; Solitarity 100.0%; I Conservative 0;
   peptide
   PA, Cohen M, Colpitts TL,
Hayden M, Hodges SC, Klass
L, Russell JC, Stroupe SD;
  (first entry)
   98WO-US006251
  97US-00828855
                        97US-00828855.
   98US-00050516
  #
   ; Score 36; DB
; Pred. No. 3e-
0; Mismatches
  DB 2;
  ₹,
   Friedman PN,
  36
   36
   0
  ulcerative colitis;
  Length 36;
   Iman PN, Gordon J;
Kratochvil JD;
  Indels
  gastric ulcer;
  gastritis
  0
  Gaps
```

0

for

(BILL/) BILLINGEL P A.

```
RESULT 17
ADA26380
CXXXXXXXXXXXXX
   SXCCCCCCCCCCCCCCCCCCCCXSXXTTTTICXXXXIIII
   밁
  S
  The invention relates to a method of detecting the presence of a target CC S 198 specific polynucleotide. The method is useful for detecting cone CS 198 specific polynucleotide. The method is useful for detecting CC diseases of the gastrointestinal (GI) tract organs, particularly cancer. CC The CS 198 spolynucleotides, polypeptides and antibodies are useful for CC detecting, diagnosing, staging, monitoring, prognosticating, preventing, treating or determining predisposition to diseases and conditions of the CG Itract such as cancer, gastric ulcer, gastritis, Crohn's disease, CC ulcerative colitis, pancreatitis and Barret's geosphagus. The CS 198 CC polypeptides are useful as standards or reagents in diagnostic CC immunoassays, as components or as target sites for various therapies. CC immunoassays, as components or as target sites for various therapies. CC diagnostic tests and for screening for conditions or disease associated CC with CS 198 particularly cancer. Monoclonal antibodies may also be used for the generation of chimeric antibodies for therapeutic use. The CS 198 colynucleotide is also useful in gene therapy and drug screening. The CC method capable of detecting early stage GI tract disease such as cancer. CC method capable of detecting early stage GI tract disease such as cancer. CC method capable of detecting early stage GI tract disease such as cancer.
  Query Match
Best Local S
  Matches
                            CS198; cancer diagnosis; cancer staging; cancer monitoring; cancer prognosticating; cancer prevention; cancer; gastrointestinal tract disorder; gene therapy.
Synthetic;
  Synthetic peptide based on CS198 protein #1.
   20-NOV-2003
  ADA26380;
  ADA26380 standard; protein; 36
   Sequence
   Claim 17; Page 51; 68pp; English.
   Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, comprises contacting test sample with at least one CS 198-specific polynucleotide.
   WPI; 2001-496163/54.
   Roberts-Rapp L, Russell
  Billingel PA,
Granados EN,
   consensus sequence
  (HAYD/)
  (COLP/)
   (ROBE/)
  (RUSS/)
  ŒAT,
   (KLAS/)
  (GRAN/)
   GORD/
  COHE/)
   μ
   1 Similarity 100.
36; Conservative
   KLASS M R.
KRATOCHVIL J I
ROBERTS-RAPP I
RUSSELL J C.
STROUPE S D.
  HAYDEN M.
HODGES S C.
  GORDON J.
GRANADOS E N.
   FRIEDMAN P N.
  COHEN
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
   36
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
   Ą
  Cohen M,
Hayden M,
  (first entry)
   16.7%; bu
100.0%; Pr
   Colpitts TL, Friedman Hodges SC, Klass MR, JC, Stroupe SD;
   Score 36; DB; Pred. No. 3e-
0; Mismatches
  ₿
   Friedman
  DB 4;
3e-28;
   0;
  Length 36;
  PN, Gordon J;
Kratochvil JD;
   Indels
   0
   Gaps
   0
```

```
RESULT 18
ADN17173
ID ADN17
XX
AC ADN17
AC ADN17
XX
DT 17-JU
XX
DE CS198
   밁
  δ
   Matches
  Query Match
  diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition of an individual to, diseases and conditions of the gastrointestinal track. e.g. cancer and in gene therapy. This is the amino acid sequence of a synthetic peptide based on the predicted human CS198 protein sequence derived from the CS198 consensus sequence shown in seq id 27.
   The invention describes a method of detecting the presence of a target CS198 polynuclectide in a test sample. The method comprises contacting the test sample with at least one CS198 specific polynuclectide or its complement, and detecting the presence of the target CS198 polynucleotide in the test sample, where the CS198-specific polynucleotide has at least 50% identity to a polynucleotide having any of the 27 fully defined sequences of 34-2894 bp (S1-27) given in the specification, or their fragments or complements. The composition and methods are useful in
  Detecting the presence of a target CS198 polynucleotide in a test sample comprises contacting the sample with a CS198 specific polynucleotide and detecting the presence of the target CS198 polynucleotide in the test
            CS198 peptide
  17-JUN-2004 (first entry)
  Sequence 36 AA;
  ADN17173;
   ADN17173 standard; peptide; 36 AA
   Claim 17; Page 51; 67pp; English
  WPI; 2003-596961/56.
  Roberts-Rapp L,
  Billingel PA,
Granados EN,
   (GORD/)
(GRAN/)
(HAYD/)
(HODG/)
(KLAS/)
   (COLP/)
   31-MAR-1997;
30-MAR-1998;
   23-OCT-2002; 2002US-00278547
  01-MAY-2003
   US2003082619-A1
  (KRAT/
   (ROBE/)
   Local Similarity
  36;
   \vdash
  1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
   GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
KLASS M R.
KRATOCHVIL J I
ROBERTS-RAPP J
   COLPITS T L. FRIEDMAN P N.
  RUSSELL J C.
STROUPE S D.
   BILLINGEL P A.
  Conservative
  Cohen M,
Hayden MA,
   97US-00828855.
98US-00050516.
  Russell
  16.7%; Suc
100.0%; Pr
   ۲٥
  Colpitts TL,
Hodges SC,
LJC, Stroupe
  Score 36;
Pred. No.
   Mismatches
   Klass
SD;
  Friedman PN,
Klass MR, Kr
  DB 6;
3e-28;
   36
   <u>,</u>
   Length 36;
   N, Gordon
Kratochvil
   0,
   Gaps
  0
```

```
RESULT 19
AAW79679
ID AAW79
XX AAW79
AC AAW79
XX 11-JA
XX 2711-JA
XX Synth
XX Gastz
KW human
KW gastz
  밁
  5
  Query Match
Best Local S
Matches 36
  The invention relates to reagents and methods for detecting diseases of the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polynucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of diseases or conditions associated with aberrant expression or activity of the CS198 polypeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 peptide used to illustrate the method of the
   Diagnosing diseases such as cancer of the detecting aberrant expression or activity associated treatment methods.
   31-MAR-1997;
30-MAR-1998;
   22-AUG-2003; 2003US-00646873.
  04-MAR-2004
  US2004043406-A1
  Unidentified
   Gastrointestinal
Gastrointestinal tract; GI tract; cancer; disease; detection; (human; predisposition; treatment; Barret's oesophagus; gastric gastritis; leiomyoma; polyps; Crohn's disease; ulcerative coli
  Seguence 36
   Claim 17;
  WPI; 2004-313754/29.
  Billingel
   Granados EN,
   Synthetic CS198 derived peptide
   11-JAN-1999
  AAW79679 standard; protein; 35
   present
  (HODG)
  (HAYD,
   (GORD)
  FRIE/)
   KRAT/
  KLAS/)
   1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
  l Similarity
36; Conserv
  KLASS M R.
KRATOCHVIL J
ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
   COLPITTS
   BILLINGEL P A. COHEN M.
  sequence
   HAYDEN M A. HODGES S C.
   GORDON J.
GRANADOS E N.
   COLPITTS T L. FRIEDMAN P N.
  PA,
   SEQ ID NO 43; 67pp; English
  $
  16.7%;
ilarity 100.0%;
Conservative (
   , Cohen M,
Hayden MA,
L, Russell
  ŗ
   (first entry)
   97US-00828855.
98US-00050516.
   tract; GI tract; CS198; cancer; gene therapy.
   is a CS198 peptide used
  ۲
  Colpitts TL,
Hodges SC,
L JC, Stroupe
   <u>,</u>
  Score 36;
Pred. No.
   8
  #3
   Mismatches
   Klass MR,
SD;
   Friedman
  DB 8;
3e-28;
   gastrointestinal tract, by of the CS198 polypeptide, and
   <u>;</u>
   Length 36;
   PN, Gordon
Kratochvil
  Indels
   colitis;
   មូរ
   0,
              cs198;
   Gaps
   0;
```

```
RESULT 20
AAE07322
ID AAE07
   X Z X S X X
  밁
  ঠ
 Query Match
Best Local Similarity
Matches 35; Conser
   www/yb77-W79680 are synthetic CS198 derived peptide fragments which are used in a method to detect the presence of a target human CS198 polynucleotide in a test sample. The CS198 gene is useful as a marker fogastrointestinal (GI) tract disorders. The methods and products can be used in detecting, diagnosing, staging, monitoring
   New gastrointestinal polynucleotides, CS198, and their detection - used for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastritis.
   31-MAR-1997;
  08-OCT-1998
  Synthetic.
   pancreatitis.
  CS 198; gastrointestinal tract disease; GI tract; cancer; gastric gastritis; Crohn's disease; ulcerative colitis; pancreatitis; Barret's oesophagus; gene therapy; drug screening; human.
   Sequence 35 AA;
   used in detecting, diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oesophagus, gastric ulcer, gastritis, leiomyoma, polyps, Crohn's disease, ulcerative
  Claim 26; Page 103; 127pp; English.
   WPI; 1998-542714/46
   Roberts-Rapp L,
   Granados
   Billing-Medel
   30-MAR-1998;
  WO9844159-A1
  Human
  06-NOV-2001
   AAE07322;
   AAE07322 standard; peptide; 35 AA
                                    31-MAR-1997;
  30-MAR-1998;
   02-AUG-2001.
  US2001010904-A1
  Homo sapiens
(BILL/) BILLINGEL P A. (COHE/) COHEN M.
  104 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
  CS 198
   1 ALFPEVFSPTPDENSDQNSRSSQASGITGSYSVS
   恩
   and pancreatitis
  Conservative
  peptide
  (first entry)
   PA,
  Hayden M,
L, Russell
   97US-00828855
   98WO-US006251
                                       97US-00828855
  98US-00050516
   Cohen M,
   16.3%;
   M, Colpitts TL,
Hodges SC, Klass
JC, Stroupe SD;
   0;
   Score 35;
Pred. No.
  Mismatches
   DB 2; Lo
3e-27;
hes 0;
  ₹,
  Friedman PN,
   138
  Length
  Kratochvil
   Indels
   35
   Gordon
  0
  Gaps
   J,
   ulcer;
  for
```

```
RESULT 21
ADA263B2
ID ADA26
XX
AC ADA26
XX
DT 20-NC
XX
DT 20-NC
XX
Syntl
XX
CS19
KW CS19
KW Canc
KW Gast
XX
OS Synt
   밁
  S
   Matches
  Query Match
  ulcerative colitis, pancreatitis and Barret's oesophagus. The CS 198 polypeptides are useful as standards or respents in diagnostic immunoassays, as components or as target sites for various therapies. Antibodies directed against at least one epitope contained within these polypeptides are useful as delivery agents for therapeutic agents, in diagnostic tests and for screening for conditions or diseases associated with CS 198, particularly cancer. Monoclonal antibodies may also be used for the generation of chimeric antibodies for therapeutic use. The CS 198 polymucleotide is also useful in gene therapy and drug screening. The method of the disease useful as gene therapy and considering of the disease such as cancer. The present sequence is a peptide derived from human CS 198 polypeptide
  CS198; cancer diagnosis; cancer staging; cancer monitoring; cancer prognosticating; cancer prevention; cancer; gastrointestinal tract disorder; gene therapy.
   diseases of the gastrointestinal (GI) tract organs, particularly cancer. The CS 198 polynucleotides, polypeptides and antibodies are useful for detecting, diagnosing, staging, monitoring, prognosticating, preventing, treating or determining predisposition to diseases and conditions of the GI tract such as cancer, gastric ulcer, gastritis, Crohn's disease,
   The invention relates to a method of detecting the presence of a target CS 198 polynucleotide comprising contacting the test sample with at led one CS 198 specific polynucleotide. The method is useful for detecting diseases of the gastrointestinal (GI) tract organs, particularly cances
                     Synthetic;
   Synthetic peptide based on
   20-NOV-2003
   ADA26382;
   Sequence 35
   Claim 17; Page 52; 68pp; English.
   Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, comprises contacting test sample with at least one CS 198-specific polynucleotide.
   WPI; 2001-496163/54.
   Roberts-Rapp L,
  Granados EN,
  Billingel
  (HAYD/)
(HODG/)
(KLAS/)
   (FRIE/)
(GORD/)
(GRAN/)
   ADA26382 standard;
  ROBE/)
   (KRAT/)
  (COLP/)
  Local
  104 ALFPEVESPTPDENSDQNSRSSSQASGITGSYSVS 138
   _
  HAYDEN M.
HODGES S C.
KLASS M R.
  COLPITTS T L. FRIEDMAN P N. GORDON J. GRANADOS E N.
  Similarity
  RUSSELL J C.
STROUPE S D.
  KRATOCHVIL J
ROBERTS-RAPP
  PA,
   ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
   sequence
  ₽,
   Conservative
   , Cohen M,
Hayden M,
L, Russell
   (first entry)
   protein;
  16.3%;
  'n,
  Colpitts TL, Friedma
Hodges SC, Klass MR,
   CS198 protein
   <u>3</u>5
  Score 35; pred. No.
   0
   Stroupe SD;
   Mismatches
  DB 4;
. 3e-27;
  Friedman
   #3
   35
   0;
  Length 35;
  PN,
   PN, Gordon J;
Kratochvil JD;
   Indels
   0
  Gaps
  at least
   0
```

```
RESULT 22
ADN17175
  SXSXSXSXS
  片
   S
   The invention describes a method of detecting the presence of a target CC CS198 polynucleotide in a test sample. The method comprises contacting CC the test sample with at least one CS198 specific polynucleotide or its CC complement, and detecting the presence of the target CS198 polynucleotide for its CC complement of the comprises polynucleotide in the test sample, where the CS198-specific polynucleotide has at least CC sol identity to a polynucleotide having any of the 27 fully defined CC sequences of 34-2894 bp (S1-27) given in the specification, or their CC diagnosting, staging, monitoring, prognostition and methods are useful in CC diagnosting, staging, monitoring, prognosticating, preventing or treating, CC or determining the predigposition of an individual to, diseases and CC conditions of the gastrointestinal tract, e.g. cancer and in gene CC therapy. This is the amino acid sequence of a synthetic peptide based on CC consensus sequence shown in seq id 27.
  Matches
  Query Match
   Detecting the presence of a target CS198 polynucleotide in a test sample comprises contacting the sample with a CS198 specific polynucleotide and detecting the presence of the target CS198 polynucleotide in the test
                      CS198 peptide #3.
  ADN17175 standard; peptide;
  Sequence
  Claim 17; Page 51; 67pp; English
  WPI; 2003-596961/56.
   Billingel PA,
Granados EN,
  (FRIE/)
   (COLP/)
   31-MAR-1997;
30-MAR-1998;
   US2003082619-A1
   Roberts-Rapp
  (ROBE/)
   (HODG/)
   (HAYD/
  (GRAN/)
  KRAT/)
  104
   FRIEDMAN
GORDON J.
RANADOS E N.
TRANADOS E N.
TRANADOS S C.
  35;
  _
   KRATOCHVIL J
ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
   Similarity
  BILLINGEL P A.
  COHEN
   KLASS M R.
  ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 138
  35
  ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS
  ă,
  Conservative
   ۲
   2002US-00278547
   3
  (first entry
  Cohen M,
Hayden MA,
  98US-00050516
  97US-00828855
  Russell
   16.3%; Score 35;
100.0%; Pred. No.
  Colpitts TL,
Hodges SC,
L JC, Stroupe
  0,
  ₿
  Mismatches
  Klass MR,
SD;
  Friedman PN,
  DB 6;
3e-27;
  35
  0;
  Length 35;
  N, Gordon
Kratochvil
  ដូដូ
  0
   Gaps
```

Gastrointestinal tract; GI tract; CS198; cancer; gene therapy.

```
RESULT 23
AAW79678
ID AAW79
XX AAW79
XX AAW79
XX I1-JP
DT 11-JP
DT Synth
XX Synth
XX Gasti
KW Gasti
KW Gasti
KW Gasti
KW Gasti
  밁
   S
  Query Match
Best Local S
Matches 35
  The invention relates to reagents and methods for detecting diseases of the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polynucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of diseases or conditions associated with abstrant expression or activity of the CS198 polypeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 peptide used to illustrate the method of the
  31-MAR-1997;
30-MAR-1998;
  Diagnosing diseases such as cancer of the gastrointestinal tract, detecting aberrant expression or activity of the CS198 polypeptid associated treatment methods.
  Unidentified
  Sequence 35
  US2004043406-A1
         Gastrointestinal tract; GI tract; cancer; disease; detection; CS198; human; predisposition; treatment; Barret's oesophagus; gastric ulcer; gastritis; leiomyoma; polyps; Crohn's disease; ulcerative colitis;
  Claim
   (HAYD/)
(HODG/)
(KLAS/)
   (GORD/)
  Synthetic CS198 derived peptide #2.
  Roberts-Rapp L,
   Granados EN,
   Billingel
   invention.
  KRAT/
   2004-313754/29.
  104 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 138
   ) GORDON J.
) GRANADOS E N.
) HAYDEN M A.
) HODGES S C.
) KLASS M R.
  COLPITTS T L.
) FRIEDMAN P N.
  35;
  RUSSELL J
STROUPE S
   KRATOCHVIL J
ROBERTS-RAPP
   BILLINGEL P A.
  Similarity
  etandard;
   PA,
  ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS 35
  SEQ ID NO 45;
  ξ,
  Conservative
   2003US-00646873.
  Cohen M,
Hayden MA,
   (first entry
   98US-00050516
  97US-00828855
  Russell
  ρņ
   protein;
   16.3%;
   67pp;
  Colpitte TL,
Hodges SC, I
   3
   0,
  Score 35;
Pred. No.
  English.
  Mismatches
  Friedman
Klass MR,
  SD;
  DB 8;
3e-27;
  0;
   Length 35;
   PN, Gordon
Kratochvil
   Indels
  polypeptide, and
   មូវ
  <u>;</u>
  Gaps
  Λq
  0
```

```
RESULT 24
AAE07321
ID AAE07
  닭
  Ś
  Best Loc
Matches
  Query Match
Best Local S
  AAW79677-W79680 are synthetic CS198 derived peptide fragments which are used in a method to detect the presence of a target human CS198 polynucleotide in a test sample. The CS198 gene is useful as a marker for gastrointestinal (GI) tract disorders. The methods and products can be used in detecting, diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oesophagus, gastric ulcer, gastritis, leiomyoma, polyps, Crohn's disease, ulcerative
  New gastrointestinal polynucleotides, CS198, and their detection - us for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastritis.
  31-MAR-1997;
  Synthetic
   WPI; 1998-542714/46.
  Granados EN,
  Billing-Medel
   30-MAR-1998;
   WO9844159-A1
   CS 198; gastrointestinal tract disease; GI tract; cancer; gastric ulcer; gastritis; Crohn's disease; ulcerative colitis; pancreatitis;
   AAE07321 standard; peptide;
  Sequence 31 AA;
   Claim
  Roberts-Rapp L,
  Barret's oesophagus;
  Human CS 198 peptide
   06-NOV-2001
   AAE07321;
  31-MAR-1997;
  02-AUG-2001.
   US2001010904-A1
  Homo sapiens. .
                        (ATTIR)
  30-MAR-1998;
            (COHB/)
  26; Page 102; 127pp; English.
   73 RLQKSQSSDLLERERESVLRREQEVAEERRN 103
  31,
                       BILLINGEL P A.
   Similarity
              COHEN M
   and pancreatitis
   RLOKSOSSDLLERERESVLRREQEVAEERRN
  Conservative
  (first entry)
   PA, Cohen M,
Hayden M, Ho
  97US-00828855
  98WO-US006251
   97US-00828855
   98US-00050516
  Russell JC,
   #2.
  gene therapy; drug screening; human.
  100.0%;
  M, Colpitts TL, Fri
Hodges SC, Klass MR,
JC, Stroupe SD;
   0
  31
   Score 31;
Pred. No.
  ₿
   Mismatches
  DB 2; 1
2.9e-23
  Friedman PN,
   and their detection - used
  Length 31;
   Kratochvil
   Indels
  Gordon
   0;
   Gaps
   0
```

(COLP/)

COLPITTS T L.

```
RESULT 25
ADA26381
ID ADA26
XX
AC ADA26
XX
DT 20-NC
XX
DT Syntl
XX
CS191
KW CS191
KW Canco
KW Gast
XX
OS Synt
   S
  맑
  diseases of the gastrointestinal (GI) tract organs, particularly cancer. CC The CS 198 polynucleotides, polypoptides and antibodies are useful for detecting, diagnosing, staging, monitoring, prognosticating, preventing, creating or determining predisposition to disease and conditions of the CG Itract such as cancer, gastric ulcer, gastritis, Crohn's disease, culcerative colitis, pancrestitis and Barret's oscophagus. The CS 198 CC ulcerative colitis, pancrestitis or reagents in diagnostic clamunoassays, as components or as target sites for various therapies. CC Antibodies directed against at least one epitope contained within these CC polypeptides are useful as delivery agents for therapeutic agents, in diagnostic tests and for screening for conditions or diseases associated CC with CS 198 particularly cancer. Monoclonal antibodies may also be used CC method of the invention provides an alternative, non-surgical diagnostic method capable of detecting early stage GI tract disease such as cancer. C content of the content of the present sequence is a peptide derived from human CS 198 polypeptide.
  Matches
   Query Match
   CS198; cancer diagnosis; cancer staging; cancer monitoring; cancer prognosticating; cancer prevention; cancer; gastrointestinal tract disorder; gene therapy.
            US2003082619-A1
   Synthetic peptide based on
   20-NOV-2003
  ADA26381;
  Sequence 31
  The invention relates to a method of detecting the presence of a target CS 198 polynuclectide comprising contacting the test sample with at least one CS 198-specific polynuclectide. The method is useful for detecting diseases of the gastrointestinal (GI) tract organs, particularly cancer.
   Claim 17; Page 51; 68pp; English
  Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, comprises contacting test sample with at least one CS 198-specific polynucleotide.
   WPI; 2001-496163/54.
   Billingel PA,
Granados EN,
   (FRIE/)
(GORD/)
(GRAN/)
(HAYD/)
(HODG/)
(KLAS/)
   ADA26381 standard;
   consensus sequence
   Roberts-Rapp L,
   (ROBE/)
  KRAT/
  Local Similarity les 31; Conserv
   73
  Ļ
   ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
  FRIEDMAN P N.
GORDON J.
GRANADOS E N.
HAYDEN M.
HODGES S C.
  KLASS M R.
KRATOCHVIL J
  RLQKSQSSDLLERERESVLRREQEVAEERRN 103
  RLOKSOSSDLLERERESVLRREQEVARERRN 31
  14.4%;
ilarity 100.0%;
Conservative (
  $
   Cohen M,
Hayden M,
   (first entry)
  Russell
  protein; 31
   Colpitts TL, Friedma
Hodges SC, Klass MR,
JC, Stroupe SD;
   CS198 protein
  0;
   Score 31;
Pred. No.
  Mismatches
   DB 4; Lo
   Friedman
  #2
  0;
   Length 31;
   PN, Gordon J;
Kratochvil JD;
  Indels
  0;
  Gaps
  0
```

```
RESULT 26
   밁
   S
  The invention describes a method of detecting the presence of a target CC CS198 polynucleotide in a test sample. The method comprises contacting CC the test sample with at least one CS198 specific polynucleotide or its CC complement, and detecting the presence of the target CS198 polynucleotide for its CC complement, and detecting the presence of the target CS198 polynucleotide has at least CC solventes of the polynucleotide having any of the 27 fully defined CC sequences of 34-2894 bp (S1-27) given in the specification, or their CC fragments or complements. The composition and methods are useful in CC diagnosing, staging, monitoring, prognosticating, preventing or treating, CC or determining the predisposition of an individual to, diseases and CC conditions of the gastrointestinal tract, e.g. cancer and in gene CC therapy. This is the amino acid sequence of a synthetic peptide based on CC consensus sequence shown in seq id 27.
  Query Match
Best Local S
Matches 31
   Detecting comprises detecting
   Sequence
   Billingel PA,
  (HAYD/)
(HODG/)
(KLAS/)
         Gastrointestinal tract; GI
                                 CS198 peptide #2.
   ADN17174 standard; peptide; 31
  Claim 17; Page 51; 67pp; English.
  sample.
  WPI; 2003-596961/56
   Roberts-Rapp L,
   Granados EN,
   (FRIE/)
   (COHE/)
   31-MAR-1997;
30-MAR-1998;
  01-MAY-2003
   (STRO/)
   (KRAT/)
   (GRAN/)
   (COLP/)
  ROBE/
  73
  31;
   ۲
   GRANADOS E N.
GRANADOS E N.
HAVDEN M A.
HODGES S C.
KLASS M R.
KRATCCHAFL J I.
ROBERTS-RAPP I
RUSSELL J C.
STROUPE S D.
  Similarity
   BILLINGEL
   COLPITTS
  COHEN M.
  FRIEDMAN
  31
   RLQKSQSSDLLERERESVLRREQEVAEERRN 103
   RLQKSQSSDLLERERESVLRREQEVAEERRN 31
   the presence of a target CS198 polynucleotide in a test sample contacting the sample with a CS198 specific polynucleotide and the presence of the target CS198 polynucleotide in the test
  $
  14.4%; Score 31; llarity 100.0%; Pred. No. Conservative 0; Mismatc
   2002US-00278547
  Cohen M,
Hayden MA,
   (first
  98US-00050516
  97US-00828855
  7 H
  Russell
   PA.
   entry)
   Colpitts TL, Fr
Hodges SC, Kla
JC, Stroupe SD;
           tract; CS198; cancer;
  B
  Mismatches
  Friedman
Klass MR,
  DB 6; 1
. 2.9e-23
  <u>,</u>
  Length
   PN, Gordon
Kratochvil
          gene therapy.
   31;
   ñ.
  0
  Gaps
```

```
RESULT 27
AAW79680
ID AAW79
XX
AC AAW79
XX
DT 11-JJ
XX
KW Syntl
XX
KW Gast
KW Gast
KW Gast
KW Gast
XX
XX
   밁
  8
   Query Match
Best Local
   The invention relates to reagents and methods for detecting diseases of the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polynucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of diseases or conditions associated with aberrant expression or activity of the CS198 polypeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 peptide used to illustrate the method of the
  31-MAR-1997;
   04-MAR-2004
   Unidentified
  30-MAR-1998;
  22-AUG-2003;
  US2004043406-A1
  Diagnosing diseases such as cancer of the detecting aberrant expression or activity associated treatment methods.
   Billingel PA,
Granados EN,
   (COTA/)
(COHE/)
  Sequence 31
   WPI;
                     Gastrointestinal tract; GI tract; cancer; disease; detection; CS198; human; predisposition; treatment; Barret's oesophagus; gastric ulcer; gastritis; leiomyoma; polyps; Crohn's disease; ulcerative colitis;
  Synthetic CS198 derived peptide
   AAW79680 standard; protein; 33
  Claim 17;
   Roberts-Rapp L,
  (KRAT/
   HODG/)
  HAYD/)
   FRIE/)
   2004-313754/29
   73
  COHEN M.
COLPITTS T L.
PRIEDMAN P N.
GRADON J.
GRANADOS E N.
HAYDEN M A.
HAYDEN M A.
  l Similarity
   RUSSELL J C.
STROUPE S D.
   KLASS M R.
KRATOCHVIL J
   BILLINGEL P
  RUSSELL
   ROBERTS-RAPP
   RLQKSQSSDLLERERESVLRREQEVAEERRN 103
  RLQKSQSSDLLERERESVLRREQEVAEERRN 31
  SEQ
   $
  2003US-00646873
   Conservative
   Hayden MA,
L, Russell
   ID NO 44; 67pp; English
  (first entry)
  98US-00050516.
   97US-00828855
   14.4%;
  Colpitts TL,
Hodges SC,
LJC, Stroupe
  Score 31; DB 8; I
Pred. No. 2.9e-23;
   <u>.</u>
  ۶
   #4.
   Mismatches
   Klass MR,
SD;
  Friedman PN,
   gastrointestinal tract, b of the CS198 polypeptide,
  <u>..</u>
   Length
  PN, Gordon
Kratochvil
  Indels
  មូដ
  0
   Gaps
   γ̈́
   and
   0
```

```
밁
   S
PA PA AXX
  RESULT 28
  Query Match
Best Local Similarity
Matches 30; Conserv
  used in detecting, diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition to diseases and conditions of the GI tract, such as GI tract cancer, Barret's oesophagus, gastric ulcer, gastritis, leiomyoma, polyps, Crohn's disease, ulcerative
  used in a method to detect the presence of a target human CS198 polynucleotide in a test sample. The CS198 gene is useful as a marker gastrointestinal (GI) tract disorders. The methods and products can be
   New gastrointestinal polynucleotides, CS198, and their detection - used for developing products for the diagnosis and treatment of gastrointestinal disorders, e.g. cancers, gastric ulcer or gastritis.
   Billing-Medel
Granados EN,
   30-MAR-1998;
   08-OCT-1998
   WO9844159-A1.
   Synthetic
  Sequence 33 AA;
   AAW79677-W79680 are synthetic CS198 derived peptide fragments wlused in a method to detect the presence of a target human CS198
  Claim
  WPI; 1998-542714/46.
  Roberts-Rapp L,
   31-MAR-1997;
  CS 198; gastrointestinal tract disease; GI tract; cancer; gastric gastritis; Crohn's disease; ulcerative colitis; pancreatitis;
  06-NOV-2001
  Barret's oesophagus;
  Human CS 198 peptide
   AAE07323;
  AAE07323 standard; peptide;
   (ABBO ) ABBOTT LAB.
   31-MAR-1997;
   02-AUG-2001.
   US2001010904-A1
  Homo sapiens
   30-MAR-1998;
  160 VDSAPPGORKKEOWYAGINPSDGINSEVLE
  26;
  4 VDSAPPGORKKEOWYAGINPSDGINSEVLE 33
  and pancreatitis
   Page 103; 127pp; English.
   Conservative
  Hayden M, Hod
L, Russell JC,
  PA,
  (first entry)
   97US-00828855
  98WO-US006251
   97US-00828855
  98US-00050516
  Cohen
   14.0%;
   #4.
  gene therapy; drug
  Z,
   Hodges
  ü
  0
  Score 30;
Pred. No.
   Colpitts TL,
ges SC, Klass
  Stroupe SD;
  Mismatches
  189
  DB 2; I
   screening;
  ₹
   Friedman PN,
   Length
  Kratochvil JD;
   Gordon
  0
  which are
  Gaps
   þ
   for
   0
```

(COTE/) (COHE/)

COLPITTS T L. FRIEDMAN P N. BILLINGEL P

```
X E X S X & X X X E X D X A X I D
  용
  8
   ADA26383
  RESULT 29
  Query Match
Best Local:
   Matches
   diseases of the gastrointestinal (GI) tract organs, particularly cancer. The CS 198 polymucleotides, polypeptides and antibodies are useful for detecting, diagnosing, staging, monitoring, prognosticating, preventing, treating or determining predisposition to diseases and conditions of the GI tract such as cancer, gastric ulcer, gastritis, Crohn's disease, ulcerative colitis, pancreatitis and Barret's oesophagus. The CS 198 polypeptides are useful as standards or reagents in diagnostic immunoassays, as components or as target sites for various therapies. Antibodies directed against at least one epitope contained within these polypeptides are useful as delivery agents for therapeutic agents, in diagnostic tests and for screening for conditions or diseases associated with CS 198, particularly cancer. Monoclonal antibodies may also be used with CS 198, particularly cancer.
                US2003082619-A1
   Synthetic;
  cancer prognosticating; cancer prognosticating; cancer prognosticating; cancer prognosticating;
   CS198; cancer diagnosis; cancer staging; cancer monitoring;
  Synthetic peptide based on CS198 protein #4.
   20-NOV-2003
   ADA26383 standard;
  Sequence
   for the generation of chimeric antibodies for therapeutic use. The CS 190 polynucleotide is also useful in gene therapy and drug screening. The method of the invention provides an alternative, non-surgical diagnostic method capable of detecting early stage GI tract disease such as cancer. The present sequence is a peptide derived from human CS 198 polypeptide
  The invention relates to a method of detecting the presence of a targe CS 198 polynucleotide comprising contacting the test sample with at lead one CS 198 specific polynucleotide. The method is useful for detecting
   Claim 17; Page 52; 68pp; English.
   Detecting the presence of target CS 198 polynucleotide, useful for detecting or diagnosing diseases of the gastrointestinal tract, contacting test sample with at least one CS 198-specific polynucle
   Granados EN, Ha
Roberts-Rapp L,
  Billingel
  (GRAN/)
(HAYD/)
(HODG/)
  consensus sequence
   WPI; 2001-496163/54
   (KRAT/)
(ROBE/)
   (RUSS/)
  (KLAS/)
  (GORD/)
   Local
  160 VDSAPPGQRKKEQWYAGINPSDGINSEVLE 189
   30;
   KLASS M R.
KRATOCHVIL J
ROBERTS-RAPP
   RUSSELL
STROUPE
  Similarity
  GORDON
   HODGES
  HAYDEN
   GRANADOS E
  u
u
  VDSAPPGORKKEOWYAGINPSDGINSEVLE 33
   PA,
  ξ
   Conservative
   , Cohen M,
Hayden M,
L, Russell
   (first
  ე
დ.ჳ
  <u>.</u>
  .
.
.
.
   z
   protein;
   entry)
  14.0%;
   r o
   cancer prevention; cancer;
   Colpitts TL, Friedman Hodges SC, Klass MR, JC, Stroupe SD;
  ű
   0,
  Score 30; DB 4; I
Pred. No. 3.1e-22;
   Mismatches
   gene therapy
  Friedman
  198-specific polynucleotide.
   Length 33;
   PN, Gordon J;
Kratochvil JD;
   Indels
   0;
   Gaps
  comprises
  target
at least
  198
   0
```

```
ADN17176
ID ADN17176
ID ADN17176
AC ADN17
AC ADN17
XX 11-JU
XX 17-JU
XX 18-JU
XX 18-JU
XX Gast1
XX Gast1
XX Unide
  Ś
   밁
   The invention describes a method of detecting the presence of a target CC CS198 polynucleotide in a test sample. The method comprises contacting Ct the test sample with at least one CS198 specific polynucleotide or its complement, and detecting the presence of the target CS198 polynucleotide in the test sample, where the CS198-specific polynucleotide has at least CS identity to a polynucleotide having any of the 27 fully defined sequences of 34-2894 bp (S1-27) given in the specification, or their CS fragments or complements. The composition and methods are useful in CS diagnosing, staging, monitoring, prognosticating, preventing or treating, or determining the predisposition of an individual to, diseases and CS conditions of the gastrointestinal tract, e.g. cancer and in gene CS therapy. This is the amino acid sequence of a synthetic peptide based on the predicted human CS198 protein sequence derived from the CS198 CS consensus sequence shown in seq id 27.
   Best Lo
  Query Match
   Detecting the presence of a target CS198 polynucleotide in a test sample comprises contacting the sample with a CS198 specific polynucleotide and detecting the presence of the target CS198 polynucleotide in the test
  Billingel PA,
Granados EN,
  31-MAR-1997;
30-MAR-1998;
  Unidentified
                             Gastrointestinal tract; GI tract; CS198; cancer; gene therapy.
  CS198
  17-JUN-2004
   ADN17176;
   ADN17176 standard;
   Sequence
   Claim 17; Page 52; 67pp; English.
   Roberts-Rapp
   (COTE/)
(COHE/)
(BITT/)
  23-OCT-2002; 2002US-00278547
  01-MAY-2003
   (KLAS/)
  (FRIE/)
   (ROBE/)
   (HAYD/)
   KRAT/
  (HODG/)
   GRAN/)
   Local
   160 VDSAPPGORKKEOWYAGINPSDGINSEVLE 189
  peptide
  4
  Similarity
   ROBERTS-RAPP
RUSSELL J C.
STROUPE S D.
  GORDON J.
GRANADOS E N.
HAYDEN M A.
HODGES S C.
KLASS M R.
  COLPITTS
  BILLINGEL
  KRATOCHVIL J
   COLPITTS T L.
FRIEDMAN P N.
   ω
u
  VDSAPPGQRKKEQWYAGINPSDGINSEVLE
   ß,
  Conservative
   Ļ
  (first entry)
   Cohen M,
Hayden MA,
  #4
  97US-00828855.
98US-00050516.
   Russell
  ۵
   peptide; 33
   r o
  14.0%; Score 30;
100.0%; Pred. No.
Live 0; Mismatc
   Colpitts TL,
Hodges SC,
LJC, Stroupe
  ₽
   Mismatches
   Klass
SD;
   Friedman PN, Gordon J;
Class MR, Kratochvil JD;
  DB 6; Le
3.le-22;
   Length 33;
   <u>.</u>
   Gaps
```

```
Search completed: March Job time: 77.679 secs
   밁
  ફ
  Query Match
Best Local Similarity
   Matches
   (BILL/) BILLINGEL P A. (COME) COLPITS T L. (FRIE) FRIEDMAN P N. (GORD/) GORDON J. (GRAN/) GRANADOS E N. (HAYD/) HAYDEN M A. (HODG/) HODGES S C. (KLAS/) KLASS M R. (KRAS/) KRATOCHYLL J D. (ROBE) ROBENTS-RAPP L. (RUSS/) RUSSELL J C. (STRO/) STROUPE S D.
   The invention relates to reagents and methods for detecting diseases of the gastrointestinal (GI) tract. The method involves detecting the presence of target CS198 polymucleotide in the test sample. The methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of diseases or conditions associated with aberrant expression or activity of the CS198 polympeptide, such as cancer of the gastrointestinal tract. These are also useful in gene therapy. The present sequence is a CS198 peptide used to illustrate the method of the
  31-MAR-1997;
30-MAR-1998;
  US2004043406-A1
  Diagnosing diseases such as cancer of the gastrointestinal tract, by detecting aberrant expression or activity of the CS198 polypeptide, and associated treatment methods.
  Billingel PA, Cohen M,
Granados EN, Hayden MA,
Roberts-Rapp L, Russell
  22-AUG-2003; 2003US-00646873.
  Claim 17, SEQ ID NO 46; 67pp; English.
  WPI; 2004-313754/29.
  Sequence 33 AA;
  invention.
  160 VDSAPPGQRKKEQWYAGINPSDGINSEVLE 189
  30,
   VDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
  14.0%; Score 30; DB 8; Le ilarity 100.0%; Pred. No. 3.1e-22; Conservative 0; Mismatches 0;
  97US-00828855.
98US-00050516.
           3, 2006, 14:24:32
  Colpitts TL, Priedman PN, Gordon
Hodges SC, Klass MR, Kratochvil
JC, Stroupe SD;
  Length 33;
   Indels
   g;
   0
   Gaps
   0
```

| , |   |  |   |  |
|---|---|--|---|--|
| • |   |  |   |  |
|   |   |  |   |  |
|   |   |  |   |  |
|   |   |  |   |  |
|   |   |  |   |  |
|   |   |  |   |  |
|   |   |  |   |  |
|   |   |  |   |  |
|   |   |  |   |  |
|   |   |  |   |  |
|   |   |  |   |  |
|   | • |  |   |  |
|   |   |  |   |  |
|   |   |  |   |  |
|   |   |  |   |  |
|   |   |  |   |  |
|   |   |  |   |  |
|   |   |  |   |  |
|   |   |  |   |  |
|   |   |  |   |  |
|   |   |  |   |  |
|   |   |  |   |  |
|   |   |  | • |  |
|   |   |  |   |  |

```
Minimum DB |
Maximum DB |
  Regult
No.
   Run on:
  A;Map position: 19p13.3
A;Introns: 594/1; 637/3; 650/3
A;Note: F21856_2
   R;Lamerdin, J.E.; McCready, P.M.; Skowronski, E.; Adamson, A.W.; rgescu, A.; Avila, J.; Liu, S.; Bruce, R.; Quan, G.; Montgomery, submitted to the EMBL Data Library, January 1998
A;Description: Sequence analysis of a 3.5 Mb contig in 19p13.3 be
   hypothetical protein F21856_2 - human
C;Species: Homo sapiens (man)
C;Date: 01-Feb-1999 #sequence_revision 01-Feb-1999 #text_change 09-Jul-2004
C;Accession: T00636
  Total number of hits satisfying chosen parameters:
   Searched
  Scoring-table: OLIGO,
   Perfect score:
   OM protein -
  Post-processing: Listing first 500 summaries
   Status: preliminary; translated from GB/EMBL/DDBJ; MOlecule type: DNA; Molecule type: DNA; Residues: 1-679 <LAM>; Residues: 1-679 <LAM>; Cross-references: UNIPROT:Q8IVT2; UNIPARC:UPI00000745CD; EMBL; AC004030; NID:g2804590;
Query Match
Best Local Similarity
  Reference number: Z14195
  Genetics:
  Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
   Score
  215
  seq length: 0
seq length: 2000000000
   protein search, using
  100.0
  Query
Match Length DB
   US-10-646-873-47
215
   March
   283416 seqs,
   PIR_80:*
   MSPRHLSESSGKPLSTKQEA...
   Copyright
  pir2:*
pir3:*
pir4:*
   3, 2006, 14:24:52; Search time 12.5056 Seconds (without alignments)
1654.188 Million cell updates/sec
  679
  100.0%;
   GenCore version 5.1.7 (c) 1993 - 2006 Biocceleration Ltd
   96216763 residues
   Gapext 60.0
  N
  T00636
   IJ
   ₩8
  Score 215; DB 2; Length 679; Pred. No. 7.5e-215;
   SUMMARIES
  ALIGNMENTS
   mode1
  Mb contig in 19p13.3 between CDC34 and D19S34
   .HKNAMAERWESRIYASEEDD 215
  hypothetical prote
  Description
  M.; Ow, D.; Nolan, M.;
```

```
Matches
645
                                    181
  585 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   525
   465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
  121
  215; Conservative
   61 VMGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRPRAPDEPQQAQVPH
                            DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679
   VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
  0
  Mismatches
  0;
  Indels
  <u>.</u>.
  Gaps
  644
  180
   584
   120
   524
   60
```

Ś

음 성 음

5

유

닭

Search completed: March 3, 2006, 14:30:52 Job time: 12.5056 secs Coom supple Sod sur.

GenCore version (c) 1993 - 2006

5.1.7 Biocceleration Ltd

```
RESULT 1
CS021 HUM
ID CS02
AC QBIV
DT 13-{
DT 
   -Word-size-:-
  Scoring table;
  Result
  Minimum DB
Maximum DB
   Post-processing: Listing
   Title:
Perfect score:
   Run on:
   OM protein - protein search, using
   Database :
   Total number of hits satisfying chosen parameters:
  Sequence:
  CS021_HUMAN
QBIVT2;
13-SEP-2005
             TISSUE-BERGIN, and Colon;
TISSUE-BERGIN, and Colon;
MEDLINE-22388257; pubMed=12477932; DOI=10.1073/pnas.242603899;
MEDLINE-22388257; pubMed=12477932; DOI=10.1073/pnas.24260389;
MEDLINE-22388257; pubMed=12477932; DOI=10.1073/pnas.24260389;
MEDLINE-22388257; pubMed=12477932; DOI=10.1073/pnas.24260389;
MEDLINE-22388257; pubMed=1247892; DOI=10.107
   Eukaryota; Metazoa;
Mammalia; Eutheria;
  NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
   NCBI_TaxID=9606;
  Homo sapiens (Human)
  Protein C19orf21.
  13-SEP-2005
   Name=C19orf21;
  HUMAN
  Score
  16
  peq
pee
  No. is the number of results predicted by greater than or equal to the score of the derived by analysis of the total score
  length: 0
length: 2000000000
   Gapop 60.0 ,
   100.0
  US-10-646-873-47
215
  Match Length
   20
  1 MSPRHLSESSGKPLSTKQEA......HKNAMAERWESRIYASEEDD
   March
   2166443 ведв,
   guery
   UniProt_05.80:*
1: uniprot_sprot:*
2: uniprot_trembl:*
  (Rel. 48, Created)
(Rel. 48, Last sequence update)
(Rel. 48, Last annotation update)
   STANDARD;

    2006, 14:19:21; Search time 76.4765 Seconds
(without alignments)

  first 500
   679
685
   Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Primates; Catarrhini; Homir
   Gapext 60.0
  BB
   _ _
  705528306 residues
  CS021_HUMAN
CS021_PONPY
  Ħ
   ¥Β
   gummaries
  SUMMARIES
  ALIGNMENTS
   mode1
   predicted by chance to have score of the result being p
  679
   (without alignments 1983.466 Million ce
   ₽
  distribution.
  N
   Q5rbh3 pongo
   Q8ivt2 homo sapien
  Description
  cell updates/sec
   Hominidae;
  printed,
   215
   pygma
```

```
RESULT 2
CS021 PON
ID CS02
  SOUTH THE STATE OF THE SECOND 
  ঠ
  Ś
  RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.
RA Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,
RA Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Balkesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smallus D.E.,
R Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
T "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences.",
L proc. Natl. Acad Sci. 17.
   밁
  δ
  밁
   밁
   맑
  S
CCCCERRRROCCCCCETTTA
   Query Match
Best Local
  Matches
   Pongo pygmaeus (Orangutan).

Pongo pygmaeus (Orangutan).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi
  GS021 PONPY STANDARD; PRT; 685 AA Q5RBH3; 13-SEP-2005 (Rel. 48, Created) 13-SEP-2005 (Rel. 48, Last sequence update) 13-SEP-2005 (Rel. 48, Last annotation updat Protein C19orf21 homolog.
  This Swiss-Prot entry is copyright. It is produbetween the Swiss Institute of Bioinformatics the European Bioinformatics Institute. There a
  SEQUENCE
   Coiled coil.
  EMBL; BC042125; AAH42125.1; EMBL; BC052236; AAH52236.1;
   Submitted (NOV-2004) to the EMBL/GenBank/DDBJ databases.
   Ensembl; ENSG00000099812; Homo sapiens
  Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
   The German cDNA consortium;
   TISSUE=Kidney;
   NCBI_TaxID=9600;
   dNC;
   PIR; T00636; T00636
   removed.
  NUCLEOTIDE SEQUENCE
  PONPY
   Local Similarity
   585
   645
  181
  121
   525 VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   465
   215;
   HGNC: 27000;
   61 VMGWEVAGAPALRLOKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDO
   1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   long as its
   NGRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  679
   545
  Conservative
  AA;
   569 Po
; 75357 MW;
  C19orf21.
  content is in no
   [LARGE SCALE
   100.0%;
  . .
  0
   Potential.
; D2881CF5087E61F8 CRC64;
   Score 215; DB 1; 1
Pred. No. 9.5e-212;
; Mismatches 0;
  mRNA.
   MRNA]
   way modified and this
  update
   is produced through
  There are
  B
  679
   and the
  Length
  ö
  Indels
  ne EMBL outstation restrictions on it
  679;
   range C.,
fullahy S.J.,
ratne P.H.,
Hulyk S.W.,
  statement
  Sanchez A.
  a collaboration -
  Hominidae;
  0
  Gaps
   human
  is not
  524
  644
   180
   584
   120
  60
```

This Swiss-Prot entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN

g

a collaboration MBL outstation -

| Sear<br>Job                                                          | B 8                                                   | 3 B O                                                                                                                                                             | SPER                                                                                                                           | 888                                                                                 |
|----------------------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Search completed: March 3, 2006, 14:29:55<br>Job time : 76.4785 весв | 47 FRAPDEPQAQVPHVWGWEVAGAPALRLQKSQSSDLLERERESVLRRE 94 | Query Match 22.3%; Score 48; DB 1; Length 685;<br>Best Local Similarity 100.0%; Pred. No. 5.5e-40;<br>Matches 48; Conservative 0; Mismatches 0; Indels 0; Gaps 0; | EMBL; CR858675; CAH90887.1; -; mRNA. Coiled coil. COILED 551 575 Potential. SEQUENCE 685 AA; 75892 MW; A3A99F4343396E81 CRC64; | use as long as its content is in no way modified and this statement is not removed. |

```
Minimum DB
Maximum DB
  Scoring cable 70041Go
  Word, Bize
  Sequence:
  OM protein -
   Post-processing: Listing first 500 summaries
   Total number of hits satisfying chosen parameters:
   RESULT 1
US-09-050-516-47
   Regult
  Perfect score:
   Sequence 47, Application US/09050516
Patent No. 6627414
GENERAL INFORMATION:
   ŏ
                          APPLICANT:
   APPLICANT:
  and is derived by analysis of the total
   pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed.
   Score
  seq length: 0
seq length: 2000000000
   protein search, using sw model
  Gapop 60.0 , Gapext 60.0
  US-10-646-873-47
215
BILLING-MEDEL, PATRI
COHEN, MAURICE
COLPITS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
   Query
Match Length
  572060 Beqs,
  1 MSPRHLSESSGKPLSTKQEA...
   March
  20
   Issued_Patents_AA:*
   GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
   /cgm2_6/ptodata/1/1aa/5_COMB.pep:*
/cgm2_6/ptodata/1/1aa/6_COMB.pep:*
/cgm2_6/ptodata/1/1aa/H_COMB.pep:*
/cgm2_6/ptodata/1/1aa/PCTUS_COMB.pep:*
/cgm2_6/ptodata/1/1aa/RE_COMB.pep:*
/cgm2_6/ptodata/1/1aa/RE_COMB.pep:*
  3, 2006, 14:30:17 ; Search time 15.8725 Seconds (without alignments) 1119.880 Million cell updates/sec
  82675679 residues
   띪
   PATRICIA
  US-09-050-516-47
US-10-278-547-47
US-10-278-547-42
US-10-278-547-42
US-09-050-516-43
US-09-050-516-43
US-09-050-516-44
US-09-050-516-44
   日
   SUMMARIES
  ALIGNMENTS
  .HKNAMAERWESRIYASEEDD
   12
   Description
   Sequence
Sequence
   Sequence
  Sequence
  Sequence
   Sequence
  Sequence
  Sequence
  Sequence
  Sequence
   444447
45533227
   RESULT 2
US-10-278-547-47
; Sequence 47, Application US/10278547
; Patent No. 6660834
   밁
  S
  밁
  S
   δ
  밁
   5
```

```
; MOLECULE TYPE: US-09-050-516-47
   Query Match
Best Local Similarity
Matches 215; Conserv
   INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 215 amino acids
   CLASSIFICATION:
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: 08/82/
PILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
  APPLICANT: STROUPE,
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
  APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
  APPLICANT:
   NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
   OPERATING SYSTEM: DOS
SOFTWARE: FABLSEQ for Windows Version
CURRENT APPLICATION DATA:
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   CORRESPONDENCE ADDRESS:
   NUMBER OF SEQUENCES:
   APPLICATION NUMBER: FILING DATE:
   ZIP:
  COUNTRY:
   STREET:
   STRANDEDNESS:
TOPOLOGY: lin
   TELEFAX: 847/938-2623
   TELEPHONE:
   COMPUTER:
  ADDRESSEE:
181
                 181 DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
  121
  121 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  61 VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
  61 VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 120
   1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   60064-3500
   amino acid
  Abbott Park
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   100 Abbott Park Road
  HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHYLL, JON D.
ROBERTS-RAPP, LISA
ROSERLL, JOHN C.
STROUPE, STEPHEN D.
STROUPE, STEPHEN D.
VENTION: REAGENTS AND METHODS USEFUL
VENTION: FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  HAYDEN,
HODGES,
   USA
  GRANADOS,
  Conservative
   linear
   IBM Compatible
   Abbott Laboratories
   847/935-1729
  No. 6627414e
   single
  100.0%;
   TRACT
  EDWARD
   US/09/050,516
   08/828,855
  47:
  0;
   6065.US.P1
  Score 215; DB 2; I
Pred. No. 1.2e-202;
  Mismatches
  Length 215;
  Indels
  0;
  Gaps
   180
  60
  60
   120
   180
```

GENERAL INFORMATION:

```
TOPOLOGY: linear

MOLECULE TYPE: NO. 6660834e
SEQUENCE DESCRIPTION: SEQ ID NO: 47:
US-10-278-547-47
                               S
   밁
  ঠ
   밁
  S
   밁
  S
   Matches 215; Conservative
  Query Match
   INFORMATION
  Local Similarity
   APPLICATION NUMBER: US/09/050,516
FILING DATE: «Unknown»
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
   TELEX: <Unknown>
WATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
   NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
  COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastUSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
  ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
  NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS: Abbott Laboratories
STREET: 100 Abbott Park Road
  APPLICANT:
  PRIOR APPLICATION DATA:
   TITLE OF
 181
                                  181
   121
  121
   13
  61
  μ
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 120
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                                  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   APPLICATION NUMBER: US/10/278,547 FILING DATE: 23-Oct-2002 CLASSIFICATION: <Unknown>
 DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
   VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVABERRNALFPEVFSPTPDENSDQ
   STRANDEDNESS: single
  LENGTH: 215 amino acids
   CITY: Abbott Park
  TELEFAX: 847/938-2623
  COUNTRY: USA
   INVENTION:
  BILLING-MEDEL, PATRICIA
  COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
  COHEN, MAURICE
  KRATOCHVIL, JON D.
VENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
  GRANADOS,
   100.0%; Score 215; DB 2; 1
100.0%; Pred. No. 1.2e-202;
ative 0; Mismatches 0;
  TRACT
  EDWARD N.
  6065.US.P1
215
  Length 215;
   Indels
   0
   Gaps
  180
   180
   120
   60
   0
```

```
á
                              밁
  밁
   ; TOPOLOGY: lir
; MOLECULE TYPE:
US-09-050-516-42
  RESULT 3
US-09-050-516-42
  Sequence 42, App. No. 662741
   Query Match
Best Local Similarity
Matches 215; Conserv
   INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 679 amino acid
   GENERAL INFORMATION:
  CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/8
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
  REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
   COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: PastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
  TITLE OF INVENTION:
TITLE OF INVENTION:
  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
  CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
  APPLICANT:
  NUMBER OF SEQUENCES:
   APPLICANT
   APPLICANT
  APPLICANT
   APPLICANT
  APPLICANT:
  NAME: Becker, Cheryl L. REGISTRATION NUMBER: 35,441
   STRANDEDNESS:
   TELEFAX: 847/938-2623
  FILING DATE:
   APPLICATION NUMBER: US/09/050,516
  COUNTRY:
   STREET:
121 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
   465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRPRAPDEPQQAQVPH
   61 VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 120
   1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   60064-3500
  amino acid
   Abbott Park
  Application US/09050516
  KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
  USA
   Conservative
  HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
   GRANADOS,
  COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
   COHEN, MAURICE
  BILLING-MEDEL,
  amino acids
  No. 6627414e
   single
  JULIAN
   100.0%;
  REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF TITRACT
  49
   EDWARD N.
  08/828,855
  42:
  PATRICIA
   <u>,</u>
   6065.US.P1
   Score 215; DB 2;
Pred. No. 3.4e-202;
   Mismatches
   0
   THE GASTROINTESTINAL
  Length 679;
   Indels
   0
   Gaps
   524
  60
```

```
S
  밁
  RESULT 4
  밁
   US-10-278-547-42
  TOPOLOGY: linear

MOLECULE TYPE: No. 6660834e

SEQUENCE DESCRIPTION: SEQ ID NO: 42:
US-10-278-547-42
밁
                                  S
   Sequence 42,
   GENERAL INFORMATION:
  Matches
  Query Match
  TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 42:
SEQUENCE CHARACTERISTICS:
  . Match 100.0%; Score 215; DB 2; J
Local Similarity 100.0%; Pred. No. 3.4e-202;
les 215; Conservative 0; Mismatches .0;
   NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSE: Abbott Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: «Unknown»
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
  NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
   CURRENT
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   TITLE OF
   APPLICANT:
  181
  585
  645
                                  1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH 60
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD
  NSRSSSQASGITGSYSVSESPPPSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679
  INT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-0ct-2002
CLASSIFICATION: «Unknown»
   COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOPTWARE: FastSEQ for Windows Version
  LENGTH: 679 amino acids
TYPE: amino acid
STRANDEDNESS: single
   ZIP: 60064-3500
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRFLRFRAPDBPQQAQVPH 524
   COUNTRY: USA
   Application US/10278547
  TELEFAX: 847/938-2623
   HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
   COLPITTS,
   BILLING-MEDEL, PATRICIA
   GORDON, JULIAN
GRANADOS, EDWARD N.
   FRIEDMAN, PAULA N.
   MAYDEN, MARK
   MAURICE
   FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   TRACEY L.
  Length 679;
  Indels
  0
  Gaps
  644
```

```
문
  밁
  Ś
   뭉
  á
   RESULT 5
US-09-050-516-43
; MOLECULE TYPE:
US-09-050-516-43
  Patent No.
   Sequence 43,
  GENERAL INFORMATION:
  INFORMATION FOR SEQ ID NO:
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
COMPUTER: IBM Compat
OPERATING SYSTEM: DO
   APPLICANT: ROBERTS-RAPP, LISA
APPLICANT: RUSSELL, JOHN C.
APPLICANT: STROUDE, STEPHEN D.
APPLICANT: STROUDE, STEPHEN D.
TITLE OF INVENTION: REAGENT'S AND METHODS USEFUL
TITLE OF INVENTION: FOR DETECTING DISEASES OF THE GASTROINTESTINAL
TITLE OF INVENTION: TRACT
   PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/8:
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
  SOPTWARE: FastSEQ for Windows Version CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
   CORRESPONDENCE ADDRESS:
   APPLICANT
  APPLICANT:
   SEQUENCE CHARACTERISTICS:
   REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION: 847/935-1729
  NUMBER OF SEQUENCES:
   APPLICANT
   APPLICANT
  APPLICANT:
  APPLICANT:
   PPLICANT:
   PPLICANT:
   PPLICANT:
  NAME: Becker, Cheryl REGISTRATION NUMBER:
  CLASSIFICATION:
  ZIP:
   COUNTRY:
   STATE:
                                    STRANDEDNESS: single TOPOLOGY: linear
  FILING DATE:
  ADDRESSEE:
  TELEFAX: 847/938-2623
   ENGTH:
   525 VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   181
   585 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKE
  121
  61
  60064-3500
   H: 36 amino acids amino acid
   Abbott Park
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679
  VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   Application US/09050516
  HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
ROBERTS-DRON
  3: Abbott Laboratories
100 Abbott Park Road
  USA
   COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
  BILLING-MEDEL, PATRICIA COHEN, MAURICE
  GRANADOS, EDWARD N.
  IBM Compatible
   Diskette
                  No: 6627414e
  MARK
   49
   08/828,855
  35,441
   43:
   6065.US
   644
  584
   120
```

Query Match

16.7%;

Score 36;

DB 2;

Length 36;

```
뭉
                                δ
   밁
  S
  ; MOLECULE TYPE: No. 6660834e; SEQUENCE DESCRIPTION: SEQ ID NO: 43: US-10-278-547-43
   RESULT 6
   US-10-278-547-43
   Sequence 43, Application US/10278547 Patent No. 6660834 GENERAL INFORMATION:
  Query Match
Best Local Similarity
Matches 36; Conserv
   Best Local Similarity Matches 36; Conserv
  TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 43:
SEQUENCE CHARACTERISTICS:
   APPLICATION NUMBER: US/09/050,516
FILING DATE: «Unknown»
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
  SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
PILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
   HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
  NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
TELECOMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
  APPLICANT: BILLING-MEDEL, PATRICIA
   NUMBER OF SEQUENCES:
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
                                MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
   COUNTRY: USA
ZIP: 60064-3500
   CITY: Abbott Park
  TYPE: amino acid
STRANDEDNESS: single
   OPERATING SYSTEM:
   TELEFAX: 847/938-2623
   LENGTH: 36 amino acids
   Conservative
  Conservative
   GORDON, JI
GRANADOS,
  COHEN, MAURICE COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
   100.0%; Pred. No. 6.1e-28; ative 0; Mismatches 0;
  16.7%; Score 36; DB 2; L
100.0%; Pred. No. 6.1e-28;
tive 0; Mismatches 0;
  JULIAN
  FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   EDWARD N.
   6065.US.P1
   Length 36;
  Indels
   Indels
   0
  0
  Gaps
   Gaps
   0
  0
```

```
RESULT 8
US-10-278-547-45
; Sequence 45, Application US/10278547
; Patent No. 6660834
   밁
  á
   RESULT 7
US-09-050-516-45
   US-09-050-516-45
   Sequence 45, Application US/09050516 Patent No. 6627414 GENERAL INFORMATION:
  Matches
  Query Match
   COMPUTER: IBM COmpatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE:
CLASSIFICATION:
FRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/828,855
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: PSCIOT CARCOLITY
  INFORMATION FOR SEQ ID NO:
   APPLICANT: ROBERTS-R
APPLICANT: RUSSELL,
APPLICANT: STROUPE,
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
  APPLICANT:
APPLICANT:
APPLICANT:
  SEQUENCE CHARACTERISTICS:
LENGTH: 35 amino acids
TYPE: amino acid
   APPLICANT:
APPLICANT:
APPLICANT:
   NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60.
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/335-1729
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
   MOLECULE TYPE: No. 6627414e
  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   APPLICANT:
   NUMBER OF SEQUENCES:
  APPLICANT:
   APPLICANT:
   STREET: 100 Abbott
CITY: Abbott Park
   TOPOLOGY:
  STRANDEDNESS:
  Local Similarity
  TELEFAX: 847/938-2623
  COUNTRY:
   104 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 138
  35;
   μ.
  60064-3500
  ALFPEVFSPTPDENSDONSRSSSOASGITGSYSVS
  HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
  USA
  16.3%; Score 35; DB 2; Lot 100.0%; Pred. No. 5.7e-27; Conservative 0; Mismatches 0;
  COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
   GRANADOS,
  BILLING-MEDEL,
   single
   JULIAN
DS, EDWARD N.
   TRACT
  REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   49
  45:
  PATRICIA
   6065.US.P1
   35
  Length 35;
  Indels
  ٥,
  Gaps
  0
```

```
문
   TOPOLOGY: linear HOLECULE TYPE: NO. 6660834e SEQUENCE DESCRIPTION: SEQ ID NO: 45: US-10-278-547-45
  US-09-050-516-44
  Query Match
Best Local Similarity
Matches 35; Conserv
  INFORMATION TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 45:
SEQUENCE CHARACTERISTICS:
LENGTH: 35 amino acids
TYPE: amino acid
STRANDEDNESS: single
   Sequence 44, Application US/09050516
  GENERAL INFORMATION:
   GENERAL INFORMATION:
  tent No.
   COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOPTWARE: FASTESKE for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: <Unknown>
  CORRESPONDENCE ADDRESS:
ADDOLL Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
  HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
  NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935.1729
   APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   APPLICANT: BILLING-MEDEL, PATRICIA
   NUMBER OF SEQUENCES:
   104 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 138
  ALFPEVESPTPDENSDQNSRSSSQASGITGSYSVS 35
   COUNTRY: USA
   TELEFAX: 847/938-2623
BILLING-MEDEL, PATRICIA
COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
   Conservative
   60064-3500
  FRIEDMAN, PAULA N.
GORDON, JULIAN
   COHEN, MAURICE
   GRANADOS,
   16.3%; Score 35; DB 2; I
100.0%; Pred. No. 5.7e-27;
  FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   TRACEY L.
   EDWARD N.
   <u>.</u>
   Mismatches
  Length 35;
   Indels
   <u>,</u>
   0
```

```
RESULT 10
US-10-278-547-44
   뭉
  ঠ
   US-09-050-516-44
  Sequence 44, Applicati
Patent No. 6660834
GENERAL INFORMATION:
   Matches
  Query Match
  COUNTRY: USA
COUNTRY: USA
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
MEDIUM TYPE: Diskette
Compatible
Compatible
DOS
  CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/82:
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
   INFORMATION FOR SEQ ID NO:
   STRANDEDNESS: single TOPOLOGY: linear MOLECULE TYPE: No. 6627
  NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
  OPERATING SYSTEM: DOS
SOFTWARE: FRANTSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE:
FILING DATE:
  APPLICANT:
  APPLICANT:
  TITLE OF INVENTION:
TITLE OF INVENTION:
   SEQUENCE CHARACTERISTICS:
LENGTH: 31 amino acids
   NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
   APPLICANT:
   PPLICANT:
   PPLICANT:
  PPLICANT
   Local
  STREET:
   TELEPHONE:
TITLE OF
   73 RLQKSQSSDLLERERESVLRREQEVAEERRN 103
   1 RLOKSOSSDLLERERESVLRREGEVÄEERRN 31
  Similarity
  Abbott Park
   amino acid
  Application US/10278547
  100 Abbott Park Road
   HODGES, STEVEN C.
KRATOCHVIL, JON D.
KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
VENTION: REAGENTS AND METHODS USEFUL
VENTION: FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   HAYDEN,
HODGES,
   847/938-2623
   GRANADOS, EDWARD
   Conservative
KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
   COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
  BILLING-MEDEL, PATRICIA
                       KLASS, MICHAEL R.
   HAYDEN, MARK
HODGES, STEVEN C.
  GRANADOS,
  COHEN, MAURICE
   No. 6627414e
  14. - 100.0%; Fi
  TRACT
  14.4%; Score 31; DB 2; 100.0%; Pred. No. 4.2e-2
  08/828,855
   EDWARD N.
  44:
  6065.US.P1
   Mismatches
  4.2e-23;
   Length 31;
   Indels
   0
  0
```

```
문
   ş
  ; MOLECULE TYPE: NO. 6660834e; SEQUENCE DESCRIPTION: SEQ ID NO: 44: US-10-278-547-44
   US-09-050-516-46
   RESULT 11
   Sequence 46, Patent No. 6
   Query Match
Best Local Similarity
   Matches
  GENERAL INFORMATION:
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 44:
SEQUENCE CHARACTERISTICS:
  APPLICANT:
APPLICANT:
  APPLICANT:
APPLICANT:
APPLICANT:
   APPLICANT:
   APPLICANT:
 TITLE OF INVENTION:
TITLE OF INVENTION:
  APPLICANT:
   APPLICANT:
   APPLICANT:
   APPLICATION NUMBER: US/09/050,516
PILING DATE: <UNKNOWN:
APPLICATION NUMBER: 08/828,855
PILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
  NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
  APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
   NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
  SOFTWARE: FASTSEQ for Windows Version 2.0 CURRENT APPLICATION DATA:
   73 RLQKSQSSDLLERERESVLRREQEVAEERRN 103
   31;
  6, Application US/09050516
6627414
  RLQKSQSSDLLERERESVLRREQEVAEERRN 31
   LENGTH: 31 amino acids
TYPE: amino acid
STRANDEDNESS: Bingle
   COUNTRY: USA
ZIP: 60064-3500
  OPERATING SYSTEM:
  CITY: Abbott Park
  TOPOLOGY:
   TELEFAX: 847/938-2623
   HODGES, STEVEN C.
KLASE, MICHAEL R.
KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
   14.4%; Score 31; DB 2; Lilarity 100.0%; Pred. No. 4.2e-23; Conservative 0; Mismatches 0;
   RUSSELL, JOHN C.
STROUPE, STEPHEN D.
  COHEN, MAURICE COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
   GRANADOS, EDWAR
  BILLING-MEDEL, PATRICIA
  linear
   MARK
REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF THE GASTROINTESTINAL TRACT
   EDWARD N.
   FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   Length 31;
  Indels
   0,
   Gaps
  0;
   Ş
   밁
```

```
RESULT 12
US-10-278-547-46
   US-09-050-516-46
  PATENT NO. 6660833
PATENT NO. 6660837
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: BILLING-MEDEL, PATRICIA
COHER, MAURICE
TRACEY L.
   INFORMATION FOR SEQ ID NO: 4
SEQUENCE CHARACTERISTICS:
LENGTH: 33 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
   Sequence
   Matches 30; Conservative
  Query Match 14.0%; Score 30; DB 2; L
Best Local Similarity 100.0%; Pred. No. 4.3e-22;
  PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/828,85
PILING DATE: 31.MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065
TELECOMMUNICATION INFORMATION:
   SOFTWARE: FASTEM: DOS
SOFTWARE: FASTERO for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE:
CLASSTOTATION OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF T
  MOLECULE TYPE:
  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
  CORRESPONDENCE ADDRESS:
  TELEPHONE: 847/935-1729
TELEFAX: 847/938-2623
  CLASSIFICATION:
  ZIP: 60064-3500
   CITY: Abbott Park
   COUNTRY:
   ADDRESSEE:
  HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
COUNTRY: USA
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
  NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
   160 VDSAPPGORKKEOWYAGINPSDGINSEVLE 189
   46,
   4 VDSAPPGORKKEOWYAGINPSDGINSEVLE 33
  CITY: Abbott Park
STATE: IL
  E: Abbott Laboratories
   Application US/10278547
   USA
  No. 6627414e
   COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
   GRANADOS, EDWARD N.
  GORDON, JULIAN
  08/828,855
   35,441
≊R: 6065.US.P1
   FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  46:
   0,
   Mismatches
   Length 33;
   0,
   Gaps
```

```
TELEX: AUTHONOMS

INFORMATION FOR SEQ ID NO: 46:
SEQUENCE CHARACTERISTICS:
LENGTH: 33 amino acide
TYPE: amino acide
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: NO. 6660834e
SEQUENCE DESCRIPTION: SEQ ID NO: 46:
US-10-278-547-46
   밁
Search completed: March 3, 2006, 14:32:05
Job time : 16:8725 secs
   Query Match 14.0%; Score 30; DB 2; Length 33; Best Local Similarity 100.0%; Pred. No. 4.3e-22; Matches 30; Conservative 0; Mismatches 0; Indels
  COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FRANCISCO OF WINDOWS Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Cct-2002
CLASSIFICATION: CUNKNOWN>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/90/050,516
FILING DATE: <UNKNOWN>
APPLICATION NUMBER: US/90/050,516
FILING DATE: <UNKNOWN>
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISCRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 35,451
TELEPONNE: 847/938-1729
TELEPONNE: 847/938-2623
TELEFAX: 847/938-2623
   160 VDSAPPGQRKKEQWYAGINPSDGINSEVLE 189
  4 VDSAPPGORKKEOWYAGINPSDGINSEVLE 33
  0; Gaps
   0;
```

Cotosus anno Brons (Usporto)

```
Result
No.
  Minimum DB
Maximum DB
   Word size :
  Scoring table: Origon 60.0 , Gapext 60.0
  Sequence:
  OM protein - protein search, using sw model
   Post-processing: Listing first 500 summaries
   Total number of hits satisfying chosen parameters:
  Title:
  Perfect score:
  91:
  score greater than or equal to the score and is derived by analysis of the total
  pred. No. 18 the number of results predicted by chance to have a score greater than or equal to the score of the result being pri
   Score
  Beq
   20
  length: 0
length: 2000000000
  March
  Query
Match Length DB
  US-10-646-873-47
215
  1867569 ведв,
   1 MSPRHLSESSGKPLSTKQEA.....HKNAMAERWESRIYASEEDD
   116.7
116.3
116.3
116.3
116.3
116.3
   Published Applications AA Main:*

1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*

2: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*

3: /cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*

4: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*

5: /cgn2_6/ptodata/1/pubpaa/US11B_PUBCOMB.pep:*

5: /cgn2_6/ptodata/1/pubpaa/US11B_PUBCOMB.pep:*
   GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
   3, 2006, 14:45:41 ; Search time 58.9206 Seconds
   417829326 residues
   r-sn
   딤
   US-10-646-873-42
  US-09-050-516-47
US-10-278-547-47
  SUMMARIES
ALIGNMENTS
  0-106-698-4761
  0-646-873-43
   )-050-516-42
)-278-547-42
   (without alignments)
1524.651 Million cell updates/sec
  20
   Description
   Sequence
  Sequence
   Sequence
  Sequence
  Sequence
  Sequence
   Sequence
  Sequence
  Sequence
   Sequence
   printed,
  42, Appl
42, Appl
42, Appl
461, Ap
33676, A
43, Appl
43, Appl
43, Appl
43, Appl
45, Appl
45, Appl
45, Appl
45, Appl
46, Appl
47, Appl
48, Appl
49, Appl
41, Appl
41, Appl
```

RESULT 1 US-09-050-516-47

```
Ś
                              밁
  á
   윰
   밁
S
  US-09-050-516-47
  Patent No.
  Sequence 47,
  Matches 215;
   Query Match
Best Local Similarity
   GENERAL INFOI
APPLICANT:
  INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
  PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/828
PILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,44
  APPLICANT: ROBERTS-RJ
APPLICANT: RUSSELL,
APPLICANT: STROUPE,
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
  APPLICANT:
  ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
  NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
  APPLICANT:
   SOFTWARE: FastSEQ for Windows Version CURRENT APPLICATION DATA:
  APPLICANT
  MOLECULE TYPE:
   TELECOMMUNICATION INFORMATION:
   APPLICANT:
   PPLICANT
   PPLICANT:
   FILING DATE:
CLASSIFICATION:
   COMPUTER: IBM CON OPERATING SYSTEM:
   COUNTRY: USA
ZIP: 60064-3500
  TELEFAX:
   APPLICATION NUMBER:
   STRANDEDNESS: single TOPOLOGY: linear
   REFERENCE/DOCKET NUMBER:
   ADDRESSEE: Abbott Laboratories
  TELEPHONE:
   ENGTH:
                              121 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   121 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
   INFORMATI
181 DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
  61 VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
  13
  1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   US20010010904A1
  d: 215 amino acids amino acid
  Abbott Park Road
  VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVAEERRNALFFEVESPTPDENSDQ
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   IL
   Application US/09050516
  HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
  Conservative
  847/938-2623
   STROUPE, STEPHEN D.
STROUPE, STEPHEN D.
PENTION: REAGENTS AND METHODS USEFUL
   ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
  GRANADOS,
   GORDON, JULIAN
   FRIEDMAN, PAULA N.
  COLPITTS, TRAC
   BILLING-MEDEL,
  HAYDEN, MARK
  IBM Compatible
  No. US20010010904A1e
   100.0%;
   TRACT
  FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  TRACEY L.
   49
   EDWARD N
   08/828,855
   US/09/050,516
   35,441
  PATRICIA
  <u>,</u>
   6065.US.P1
   Score 215; DB 3; 1 Pred. No. 6.1e-198;
  Mismatches
   0
   Length 215;
   Indels
   0
  Gaps
                                   180
  180
   120
  120
   60
```

밁

181

```
당
                                     Ś
   밁
   ঠ
   TOPOLOGY: linear

MOLECULE TYPE: No. US20030082619A1e
SEQUENCE DESCRIPTION: SEQ ID NO: 47:
US-10-278-547-47
  RESULT 2
US-10-278-547-47
  Sequence 47, Application US/10278547 Publication No. US20030082619A1 GENERAL INFORMATION:
   Matches 215;
   Ouery Match
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
LENGTH: 215 amino acids
TYPE: amino acid
STRANDEDNESS: single
   Loca.
   NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
PILING DATE: «Unknown»
APPLICATION NUMBER: 08/828,855
PILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
   COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
   ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
  KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
  APPLICANT: BILLING-MEDEL, PATRICIA
COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
                                       5
   l Similarity
                         VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 120
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
   STREET: 100 Abbott Park Road CITY: Abbott Park
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
   COUNTRY: USA
  ADDRESSEE: Abbott Laboratories
   TELEFAX: 847/938-2623
   Conservative
  GRANADOS, EDWARD N.
  HODGES, STEVEN C.
KLASS, MICHAEL R.
   100.0%; Score 215; DB 4; 1 100.0%; Pred. No. 6.1e-198;
  JULIAN
   0;
   Mismatches
   6065.US.P1
   0
   Length 215;
   Indels
   <u>,</u>
   Gaps
   60
   60
   0
```

```
TOPOLOGY: linear
; MOLECULE TYPE: NO. US20040043406Ale
SEQUENCE DESCRIPTION: SEQ ID NO: 47:
US-10-646-873-47
   RESULT 3
US-10-646-873-47
   S
   밁
  S
  Sequence 47, Application US/10646873
Publication No. US20040043406A1
GENERAL INFORMATION:
APPLICANT: BILLING-MEDEL, PAT
   Matches 215;
   Query Match
Best Local Similarity
  TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
   PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/09/050,516

FILING DATE: 30-MAR-1998

APPLICATION NUMBER: 08/828,855

FILING DATE: 31-MAR-1997

ATTORNEY/AGENT INFORMATION:

NAME: Becker, Chery/1 L.

REGISTRATION NUMBER: 35,441

REGISTRATION NUMBER: 35,441
  COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTMARE: FRATESE FOR Windows Version 2.0
CURRENT APPLICATION DATA:
   NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
  REFERENCE/DOCKET NUMBER: TELECOMMUNICATION INFORMATION:
  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   TITLE OF
  181 DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
   121 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH 60
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
  LENGTH: 215 amino acids
TYPE: amino acid
STRANDEDNESS: single
   CITY: Abbott Park
STATE: IL
   APPLICATION NUMBER: US/10/646,873 FILING DATE: 22-Aug-2003
  TELEPHONE: 847/935-1729
TELEFAX: 847/938-2623
   CLASSIFICATION: <Unknown>
  ZIP: 60064-3500
  COUNTRY: USA
                                       100.0%; Silarity 100.0%; IConservative 0;
   HAYDEN, MARK
HODGES, SIEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN GRANADOS, EDWARD N.
  BILLING-MEDEL, PATRICIA
  COHEN, MAURICE
   Score 215; DB 4; 1
Pred. No. 6.1e-198;
); Mismatches 0;
  6065.US.P1
   Length 215;
  Indels
   0;
   Gaps
```

δ

```
S
   밁
   ঠ
   RESULT 4
US-09-050-516-42
  밁
   밁
   Sequence 42,
   GENERAL INFORMATION APPLICANT: BILLII
  tent No.
  NFORMATION FOR SEQ ID NO:
   APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
  APPLICANT:
APPLICANT:
  COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
   ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
TOPOLOGY:
   SEQUENCE CHARACTERISTICS:
  REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
   APPLICATION NUMBER: 08/8: FILING DATE: 31-MAR-1997 ATTORNEY/AGENT INFORMATION:
   PRIOR APPLICATION DATA:
   CORRESPONDENCE ADDRESS:
   NUMBER OF SEQUENCES:
   TITLE OF INVENTION:
   PPLICANT:
   PPLICANT:
                        STRANDEDNESS:
                                      TYPE: amino acid
   CLASSIFICATION:
   APPLICATION NUMBER:
  COUNTRY:
  CITY: Abbott Park
   STREET:
   ADDRESSEE:
   TELEFAX: 847/938-2623
   181
  181
   121
   121
  61
  61
  2, Application US/09050516 US2001001090481
  VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSFTFDENSDQ 120
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
   VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
 TYPE:
  INVENTION:
   H
  HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROITES
   100 Abbott Park Road
   USA
   STROUPE, STEPHEN D.
   COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
  COHEN, MAURICE
   BILLING-MEDEL, PATRICIA
   GRANADOS,
   Abbott Laboratories
              linear
 No. US20010010904A1e
  Cheryl L.
                           single
   MARK
  REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF THE GASTROINTESTINAL TRACT
  49
   EDWARD N.
   08/828,855
   US/09/050,516
  42:
   215
   120
  180
  60
  밁
  á
   밁
  S
   밁
  Ś
   뭉
  S
```

```
Query Match
Best Local Similarity 100.
Matches 215; Conservative
  US-10-278-547-42
  Sequence 42, Application US/10278547 Publication No. US20030082619A1 GENERAL INFORMATION:
  INFORMATION FOR SEQ ID NO: 42:
SEQUENCE CHARACTERISTICS:
   APPLICATION NUMBER: US/09/050,516
PILING DATE: <Unknown>
APPLICATION NUMBER: 08/828,855
PILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
  COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FBACESQ for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
   NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSE: Abbott Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
   ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
SEQUENCE
  TITLE
  PRIOR APPLICATION DATA:
   645
  585
   525
   465
  181
   121
   61 VMGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   NSRSSSQASGITGSYSVSBSPFFSPIHLHSNVAWTVEDPVDSAPPGQRKXEQWYAGINPS
  DGINSEVLRAIRVTRHKNAMAERWESRIYASEEDD 215
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   VWGWEVAGAPALRIQKSQSSDLLERERESVLRREQEVALERRNALFPEVFSPTPDENSDQ
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  STATE: IL
   KRATOCHVIL, JON D.

OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  TELEPHONE: 847/935-1729
  TELEFAX: 847/938-2623
   HAYDEN, MARKA
HODGES, STEVEN C.
KLASS, MICHAEL R.
  BILLING-MEDEL, PATRICIA COHEN, MAURICE
  COLPITTS, TRACEY L
FRIEDMAN, PAULA N.
GORDON, JULIAN
  GRANADOS,
   100.0%;
   EDWARD N.
  TRACEY L.
  <u>.</u>
   Score 215; DB 3;
Pred. No. 1.7e-197;
  Mismatches
  Length 679;
  0
  Gaps
   180
   584
  120
  524
  644
   60
```

```
TYPE: amino acid

STRANDEDNESS: single

TOPOLOCY: linear

MOLECILE TYPE: N220030082619Ale
SEQUENCE DESCRIPTION: SEQ ID NO: 42:
US-10-278-547-42
   밁
   ঠ
   문
   5
  밁
  δ
  δ
  US-10-646-873-42
  片
   Sequence 42, Application US/106
Publication No. US20040043406A1
GENERAL INFORMATION:
   Matches 215;
   Query Match
  Local Similarity
   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
PILING DATE: 30-MAR-1998
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
   COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOPTMARE: FBACESQ for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/646,873
FILING DATE: 22-Aug-2003
CLASSIFICATION: <Unknown>
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
TELECOMMUNICATION INFORMATION
  NUMBER OF SEQUENCES: 49
   TITLE OF
  APPLICANT: BILLING-MEDEL, PATRICIA
   645
   585
  525
  465
   181
  121
  19
  1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
   DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
   NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
  VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
   VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH
                NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 60
  COUNTRY: USA
ZIP: 60064-3500
   Application US/10646873
   Conservative
  HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  GRANADOS,
  COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
   GORDON, JULIAN
   COHEN, MAURICE
  100.0%;
   MARK
   TRACT
  EDWARD N.
   0
   Score 215; DB 4;
Pred. No. 1.7e-197;
Mismatches 0;
                6065.US.P1
   679
  ۵.
0
   Length 679
   Indels
   <u>,</u>
   Gaps
  584
  120
  524
   644
   60
   0
```

```
Publication No. US20030109590A1

GENERAL INFORMATION:
APPLICANT: Ruben et al.
TITLE OF INVENTION: Colon and Colon Cancer A
FILLE REFERENCE: PA005P1
CURRENT APPLICATION NUMBER: US/10/106,698
CURRENT FILING DATE: 2000-03-27
PRIOR APPLICATION NUMBER: PCT/US00/26524
PRIOR FILING DATE: 2000-09-28
PRIOR FILING DATE: 1099-09-29
PRIOR PRIOR PILICATION NUMBER: US 60/157,137
PRIOR FILING DATE: 1999-09-29
PRIOR PILING DATE: 1999-11-03
NUMBER: OF SEQ ID NOS: 8564
SOFTWARE: PATENTIN PATENTIN SEG ID NO 4761
LENGTH: 172
  TOPOLOGY: Lingle

HOLECULE TYPE: No. US20040043406Ale
SEQUENCE DESCRIPTION: SEQ ID NO: 42:
US-10-646-873-42
밁
                                    S
  밁
   S
  문
   5
  밁
   á
  밁
  US-10-106-698-4761
  RESULT 7
US-10-106-698-4761
  Matches
  Query Match
   Sequence 4761, Application US/10106698 Publication No. US20030109690A1
   Matches
  Query Match
Best Local Similarity
  FEATURE:
NAME/KEY: MISC FEATURE
LOCATION: (55)
OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
NAME/KEY: MISC FEATURE
LOCATION: (116)
OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 42:
SEQUENCE CHARACTERISTICS:
  ORGANISM: Homo sapiens
  TYPE: PRT
   Local
  645
  181 DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 215
   121 NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS 180
  465 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH 524
  525 VWGWEVAGAPALRLOKŚOSSDLLERERESVLKKEOEVABERRNALFPEVFSPTPDENSDO 584
   215;
  61 VWGWEVAGAPALRLQKSQSSDLLERERESVLRREQEVAEERRNALFPEVFSPTPDENSDQ 120
  56
                       99 EERRNALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVED 158
  1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVRWEYFRLRPLRFRAPDEPQQAQVPH 60
   Similarity
EERRNALFPEVESPTPDENSDQNSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVED
  NSRSSSQASGITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQWYAGINPS
  DGINSEVLEAIRVTRHKNAMAERWESRIYASEEDD 679
  TYPE: amino acid
  LENGTH: 679 amino acids
  TELEFAX: 847/938-2623
   TELEPHONE: 847/935-1729
   Conservative
   Colon and Colon Cancer Associated Polynucleotides and Polypeptide
  100.0%;
   27.9%;
  0;
  <u>.</u>
   Score 60;
Pred. No.
  Score 215; DB 4;
Pred. No. 1.7e-197;
  Mismatches
   Mismatches
   DB 4; L
3.6e-49;
   <u>,,</u>
  Length 172
  Length 679;
   Indels
  <u>,</u>
  Gaps
  Gaps
  115
```

```
밁
  US-10-029-386-33676
   Matches
   Query Match
Best Local Similarity
   Sequence 33676, Application US/10029386 Publication No. US20030194704A1
   SEQ ID NO 33676
   GENERAL INFORMATION:
  CURRENT APPLICATION NUMBER: US/10/029,386
CURRENT FILING DATE: 2001-12-20
   NUMBER OF SEQ ID NOS: 34288
   APPLICANT: Hanzel, David K.
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR
TITLE OF INVENTION: EXPRESSION ANALYSIS TWO
  APPLICANT: Penn, Sharron G.
   OTHER INFORMATION: MAP TO ACOO4030.1
OTHER INFORMATION: EXPRESSED IN HELA, SIGNAL = 0.42
   FEATURE:
  ORGANISM: Homo sapiens
  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
               COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOPTWARE: FASTSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
   APPLICANT:
   CORRESPONDENCE ADDRESS
  PPLICANT
   PPLICANT
  PPLICANT
   COUNTRY: USA
ZIP: 60064-3500
   ADDRESSEE:
  REFERENCE: AEOMICA-X-2
APPLICATION NUMBER: US/09/050,516
   LICANI
  131 ITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPFGQRKKEQW 173
   43,
  Abbott Park
   Annomax Sequence Listing Engine vers. 1.1
  ITGSYSVSESPFFSPIHLHSNVAWTVEDPVDSAPPGQRKKEQW 43
  Application US/09050516
  Rank,
  100 Abbott Park Road
   Conservative
  BILLING-MEDEL, PATRICIA COHEN, MAURICE
  PRIEDMAN, PAULA N.
  HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D
   GRANADOS,
   ROBERTS-RAPP, LISA
   Abbott Laboratories
  0010904A1
  David R
   JULIAN
   MARK
   STEPHEN D.
   100.0%;
  REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF T TRACT
   20.0%; Score 43; DB 4;
100.0%; Pred. No. 2.3e-
   EDWARD N.
   Mismatches
   2.3e-33;
  OF THE GASTROINTESTINAL
  Length 43;
   Indels
   0
  밁
```

```
RESULT 10
US-10-278-547-43
  US-09-050-516-43
   Best Loc
Matches
  Sequence 43, Application US/10278547 Publication No. US20030082619A1
  Query Match
Best Local Similarity
   INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 36 amino acids
  GENERAL
   TOPOLOGY: linear MOLECULE TYPE: No. US20010010904A1e
   TELECOMMUNICATION INFORMATION: 847/935-1729
  ATTORNEY/AGENT INFORMATION:
  OPERATING SYSTEM: DOS
SOPTWARE: FastSEQ for Windows Version 2.
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION - <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
FILING DATE: - CUnknown>
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY, BOLOGY OF STATE OF ST
   STRANDEDNESS:
TOPOLOGY: li
  REFERENCE/DOCKET NUMBER
   REGISTRATION NUMBER:
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
  CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
  TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
  NUMBER OF SEQUENCES: 49
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
   COUNTRY: USA
ZIP: 60064-3500
   CITY: Abbott Park
  847/938-2623
   Conservative
   BILLING-MEDEL, PATRICIA
  COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
   HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
  COHEN, MAURICE
  GRANADOS,
  Cheryl L
  single
   16.7%; ----
100.0%; Pr/
0;
   IBM Compatible
   MARK
  08/828,855
   35,441
   FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   EDWARD N.
   43:
  Score 36; DB 3;
; Pred. No. 1e-26;
  6065.US.P1
   Mismatches
   0
   Length 36;
   Indels
   <u>,</u>
   Gaps
```

INFORMATION FOR SEQ ID NO: 43: SEQUENCE CHARACTERISTICS:

TELEX: <Unknown>

TELEPHONE: 847/935-1729 TELEFAX: 847/938-2623

```
밁
   S
   ; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: NO. US20030082619A1e
; SEQUENCE DESCRIPTION: SEQ ID NO: 43:
US-10-278-547-43
  US-10-646-873-43
  RESULT 11
   Sequence 43, App
Publication No.
  Query Match
Best Local
   Matches
TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 43:
SEQUENCE CHARACTERISTICS:
   GENERAL INFORMATION:
   ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
   ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
  SOFTWARE: FastSEQ for Windows Version 2.0 CURRENT APPLICATION DATA:
  CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
   HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
KRATOCHVIL JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
  REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
  CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
  APPLICANT: BILLING-MEDEL, PATRICIA
   NUMBER OF SEQUENCES:
   ch 16.7%; Score 36; DB 4; Length 36; Similarity 100.0%; Pred. No. 1e-26; 36; Conservative 0; Mismatches 0; Indels
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
  APPLICATION NUMBER: US/09/050,516
FILING DATE: 30-MAR-1998
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
  MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
   APPLICATION NUMBER: US/10/646,873 FILING DATE: 22-Aug-2003
   LENGTH: 36 amino acids
  TELEFAX: 847/938-2623
   CITY: Abbott Park
   Application US/10646873
  GORDON, JULIAN GRANADOS, EDWAI
   COHEN, MAURICE COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
  HAYDEN, MARK
  FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  EDWARD N.
  ,
   0
   Gaps
   0
```

```
; TOPOLOGY: 11near;
; MOLECULE TYPE: No. US20040043406Ale
; SEQUENCE DESCRIPTION: SEQ ID NO: 43:
US-10-646-873-43
   밁
   Ś
TOPOLOGY: 1:

; MOLECULE TYPE:

US-09-050-516-45
  US-09-050-516-45
  Matches
   Query Match
Best Local Similarity
   APPLICATION UNMBER: US/09/050,51

FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/828,855

PILING DATE: 31-MAR-1997
ATTONNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REGISTRATION NUMBER: 3665.US
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
   INFORMATION FOR SEQ ID NO:
  SEQUENCE CHARACTERISTICS:
LENGTH: 35 amino acids
TYPE: amino acid
   OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatil
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
   APPLICANT:
  TITLE OF INVENTION:
TITLE OF INVENTION:
  NUMBER OF SEQUENCES:
  APPLICANT:
  APPLICANT:
  APPLICANT:
  APPLICANT:
   APPLICANT:
  APPLICANT:
  APPLICANT
   APPLICANT
  APPLICANT:
  APPLICANT:
   STREET: 100 ._
CITY: Abbott Park
   STRANDEDNESS:
   TELEFAX:
  COUNTRY:
  36;
   1 MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
   60064-3500
   MSPRHLSESSGKPLSTKQEASKPPRGCPQANRGVVR 36
  TYPE: amino acid
  Application US/09050516
  847/938-2623
   COHEN, MAURICE COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
  Conservative
  USA
  STROUPE, STEPHEN D.
  ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
  IBM Compatible
  HODGES, STEVEN C.
KLASS, MICHAEL R.
   HAYDEN,
                linear
E: No. US20010010904Ale
  KRATOCHVIL, JON D
  GRANADOS,
  BILLING-MEDEL, PATRICIA
  single
   JULIAN
  MARK
  TRACT
  100.0%;
   REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   49
  us/09/050,516
  EDWARD N.
   45:
  0
   Score 36; DB 4; 
; Pred. No. 1e-26;
  6065.US.P1
   Mismatches
  1e-26;
  o,
   Length 36;
   Indels
  0
  Gaps
```

```
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: NO. US20030082619A1e
SEQUENCE DESCRIPTION: SEQ ID NO: 45:
US-10-278-547-45
  밁
   Ś
  RESULT 13
   US-10-278-547-45
  Sequence 45, Application US/10278547 Publication No. US20030082619A1 GENERAL INFORMATION:
  Query Match 16.3%; Score 35; DB Best Local Similarity 100.0%; Pred. No. 9e-Matches 35; Conservative 0; Mismatches
   Matches
   Query Match
Best Local Similarity
  TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 45:
SEQUENCE CHARACTERISTICS:
LENGTH: 35 amino acids
TYPE: amino acid
   APPLICATION NUMBER: US/09/050,516
PILING DATE: <UNKNOWN:
APPLICATION UNMBER: 08/028,855
PILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
   HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
KRATOCHVIL SON D.
METHODS USEFUL
   APPLICATION NUMBER: US/10/278,547
PILING DATE: 23-Oct-2002
CLASSIFICATION: «Unknown»
PRIOR APPLICATION DATA:
   REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEPAX: 847/938-2623
  CURRENT APPLICATION DATA:
  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
  NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
   APPLICANT: BILLING-MEDEL, PATRICIA
   104 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 138
104 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 138
  ALFPEVESPTPDENSDQNSRSSSQASGITGSYSVS 35
  COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOPTWARE: FastSEQ for Windows Version 2.0
   STREET: 100 Abbott Park Road CITY: Abbott Park
   ZIP: 60064-3500
  COUNTRY: USA
                                       Conservative
   COHEN, MAURICE COLPITTS, TRACEY L. FRIEDMAN, PAULA N.
  GORDON, JULIAN
GRANADOS, EDWAH
   HAYDEN, MARK
   16.3%; Score 35; DB 4; Length 35; 100.0%; Pred. No. 9e-26;
  TRACT
   FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  EDWARD N.
   .
   Mismatches
   DB 3; Length 35; 9e-26;
  0
   0
  Indels
   Indels
  0;
   0;
  Gaps
   Gaps
  0
   0;
```

გ

RESULT 15 US-09-050-516-44

```
LENGTH: 35 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: No. US20040043406Ale
SEQUENCE DESCRIPTION: SEQ ID NO: 45:
US-10-646-873-45
   밁
  RESULT 14
US-10-646-873-45
    문
   Sequence 45, Application US/10646873 Publication No. US20040043406A1
   Matches
  Query Match
Best Local Similarity
  TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 45:
SEQUENCE CHARACTERISTICS:
   GENERAL INFORMATION:
   PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/09/050,516

APPLICATION NUMBER: 08/828,855

FILING DATE: 30-MAR-1998

APPLICATION NUMBER: 08/828,855

FILING DATE: 31-MAR-1997

ATTORNEY/AGENT INFORMATION:

NAME: Becker, Cheryl L.

REGISTRATION NUMBER: 35,441

REGISTRATION NUMBER: 6665.US.P1

TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION INFORMATION:
   COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FRANCESO FOR WINDOWS Version 2.0
CURRENT APPLICATION DATA:
  ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
  NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
  KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  APPLICANT: BILLING-MEDEL, PATRICIA COHEN, MAURICE
                           104 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 138
   35;
1 ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS
   ALFPEVFSPTPDENSDQNSRSSSQASGITGSYSVS 35
   APPLICATION NUMBER: US/10/646,873 FILING DATE: 22-Aug-2003 CLASSIFICATION: Unknown>
   STREET:
  COUNTRY: USA
  CITY: Abbott Park
   ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
  TELEFAX: 847/938-2623
   Conservative
  COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
   HODGES, STEVEN C.
KLASS, MICHAEL R.
   GRANADOS, EDWARD N.
   16.3%; Score 35; DB 4;
100.0%; Pred. No. 9e-26
tive 0; Mismatches
  6065.US.P1
  DB
. 9e-26;
0;
        ω
5
   Length 35;
   Indels
   0
```

```
Sequence 44, Application US/10278547; Publication No. US20030082619A1; GENERAL INFORMATION:
  RESULT 16
US-10-278-547-44
   문
   ঠ
  ; TOPOLOGY: linear; MOLECULE TYPE: No. US20010010904A1e US-09-050-516-44
   Sequence 4
Patent No.
   Matches
  Query Match
Best Local Similarity
   SEQUENCE CHARACTERISTICS:
LENGTH: 31 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
   ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatibl
OPERATING SYSTEM: DOS
  INFORMATION FOR SEQ ID NO:
  APPLICANT: KLASS, MI
APPLICANT: KRATOCHVI
APPLICANT: ROBERTS-R
APPLICANT: RUSSELL,
APPLICANT: STROUPE,
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
   APPLICANT:
APPLICANT:
APPLICANT:
   COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/050,516
  NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.Pl
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847,935-1729
   CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION UNMBER: 08/8
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
   CORRESPONDENCE ADDRESS
  APPLICANT:
   STREET:
  STATE: I
COUNTRY:
  TELEFAX: 847/938-2623
   ADDRESSEE: Abbott Laboratories
APPLICANT: BILLING-MEDEL, PATRICIA COHEN, MAURICE COLPITTS, TRACEY L.
  44,
   INFORMATION
   73 RIQKSQSSDLLERERESVLRREQEVABERRN 103
   31; Conservative
   4, Application US/09050516
US20010010904A1
   T: 100 Abbott Park Road
Abbott Park
   RLOKSOSSDLLERERESVLRREQEVAEERRN 31
  USA
  HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
STROUPE, REAGENTS AND METHODS USEFUL
VENTION: FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  COHEN, MAURICE
COLPITTS, TRACEY L.
FRIEDMAN, PAULA N.
  GORDON, JULIAN
GRANADOS, EDWARD N.
   BILLING-MEDEL, PATRICIA
  HAYDEN, MARK
  TRACT: 49
   14.4%; Score 31; DB 3; L
100.0%; Pred. No. 5.6e-22;
tive 0; Mismatches 0;
  08/828,855
  44:
  Length 31;
   0;
   Gaps
   0
   TOPOLOGY: linear

HOLECULE TYPE: NO. US20030082619A1e
SEQUENCE DESCRIPTION: SEQ ID NO: 44:
US-10-278-547-44
  RESULT 17
US-10-646-873-44
; Sequence 44, Application US/10646873
; Publication No. US20040043406A1
; GENERAL INFORMATION:
  밁
  S
   Matches
   Query Match
Best Local Similarity
   TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 44:
SEQUENCE CHARACTERISTICS:
  APPLICATION NUMBER: US/09/050,516
PILING DATE: «Unknown»
APPLICATION NUMBER: 08/828,855
PILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
  CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: -Unknown>
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
  TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEFAX: 847/938-2623
  ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
  KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
   NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
  APPLICANT:
  73 RLOKSOSSDLIERERESVLRREGEVAEERRN 103
   31;
  1 RLQKSQSSDLLERERESVLRREQEVAEERRN 31
   COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
   TYPE: amino acids
  COUNTRY:
   CITY: Abbott Park
   Conservative
   COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN GRANADOS, EDWARD N.
   HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
  BILLING-MEDEL, PATRICIA COHEN, MAURICE
   HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
   GRANADOS,
   GORDON, JULIAN
  FRIEDMAN, PAULA N.
  USA
   14.4%; Score 31; DB 4; 1 100.0%; Pred. No. 5.6e-22
  TRACT
   EDWARD N.
   0; Mismatches
   Length 31;
```

0

Gaps

```
RESULT 18
US-09-050-516-46
  JS-10-646-873-44
   Matchee
   Query Match
Best Local S
   Seguence 46,
  GENERAL INFORMATION APPLICANT: BILLII
  TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 44:
SEQUENCE CHARACTERISTICS:
   APPLICANT:
  APPLICANT:
   APPLICANT
  APPLICANT:
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
   o
O
   NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
  APPLICATION NUMBER: US/10/646,873
FILING DATE: 22-Aug-2003
CLASSIFICATION: cUnknowns
PRIOR APPLICATION DATA:
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
  TOPOLOGY: linear MOLECULE TYPE: No. US20040043406Ale SEQUENCE DESCRIPTION: SEQ ID NO: 44:
  ATTORNEY
   SOFTWARE: FastSEQ for Windows Version 2.0 CURRENT APPLICATION DATA:
  NUMBER OF SEQUENCES: 49
   TITLE OF INVENTION:
   73 RLOKSOSSDLIERERESVLRREQEVAEERRN 103
   Similarity
   US20010010904A1
  TYPE: amino acids
  APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
NBY/AGENT INFORMATION:
  RLOKSOSSDLLERERESVLRREQEVAEERRN 31
   TELEPHONE: 847/935-1729
TELEFAX: 847/938-2623
   APPLICATION NUMBER: US/09/050,516 FILING DATE: 30-MAR-1998
   OPERATING SYSTEM: DOS
  ZIP: 60064-3500
   CITY: Abbott Park
   STRANDEDNESS: single
   Application US/09050516
   COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
KRATOCHVIL, JON D.
ROBERTS-RAPP, LISA
RUSSELL, JOHN C.
STROUPE, STEPHEN D.
RENGENTS AND METHODS USEFUL
RENTION: REAGENTS AND METHODS USEFUL
  COHEN, MAURICE
   GRANADOS,
  BILLING-MEDEL, PATRICIA
   GRATOCHVIL, JON D.
  N, MARK
S, STEVEN C.
, MICHAEL R.
   14.4%; Score 31; DB 4; Lo
100.0%; Pred. No. 5.6e-22;
ative 0; Mismatches 0;
   EDWARD N.
   REAGENTS AND METHODS USEFUL FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  Length 31;
   Indels
   <u>,</u>
   0
  밁
  S
   RESULT 19
US-10-278-547-46
  US-09-050-516-46
   Matches
```

밁 ş

ZIP: 60064-3500

COUNTRY: USA

```
Sequence 46, App
Publication No.
  Query Match
Best Local Similarity
   ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6065
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
   SEQUENCE CHARACTERISTICS
  GENERAL INFORMATION: APPLICANT: BILL
  TYPE: amino acids
STRANDEDNESS: single
TOPOLOGY: limi
  SOFTWARE: FastSEQ for Windows Version 2.0 CURRENT APPLICATION DATA:
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
  CORRESPONDENCE ADDRESS
  TITLE OF INVENTION:
   MOLECULE TYPE:
   CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE: 31-MAR-
   APPLICATION NUMBER: US/09/050,516
   COMPUTER: IBM CONTROL OPERATING SYSTEM:
  COUNTRY: USA
ZIP: 60064-3500
  ADDRESSEE: Abbott Laboratories STREET: 100 Abbott Park Road
   FILING DATE:
   TELEFAX:
                             NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
  160 VDSAPPGORKKEOWYAGINPSDGINSEVLE 189
   30;
  Abbott Park
   H
STATE: IL
             CITY: Abbott Park
  Application US/10278547
10. US20030082619A1
   847/938-2623
  Conservative
   KRATOCHVIL, JON D.
INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
  IBM Compatible
  Diskette
  COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GORDON, JULIAN
  BILLING-MEDEL, PATRICIA COHEN, MAURICE
   HAYDEN, MARK
HODGES, STEVEN C.
KLASS, MICHAEL R.
   31-MAR-199
  GRANADOS,
   No. US20010010904Ale
   14.0%; Score 30; DB
100.0%; Pred. No. 5.4
:ive 0; Mismatches
  08/828,855
  TRACT
   BDWARD N.
   6065.US.P1
  DB 3;
5.4e-21
   Length 33;
  Indels
  <u>,</u>
  Gaps
```

SOFTWARE: FastSEQ for Windows Version 2.0 CURRENT APPLICATION DATA:

OPERATING SYSTEM: DOS

IBM Compatible

COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette

```
TOPOLOGY: linear;

MOLECULE TYPE: NO. US20030082619Ale
SEQUENCE DESCRIPTION: SEQ ID NO: 46:
US-10-278-547-46
   US-10-646-873-46
Sequence 46, Application US/10646873
Diblication No. US20040043406A1
GENERAL INFORMATION:
  믕
  ફ
   RESULT 20
   Query Match
Best Local Similarity
  INFORMATION FOR SEQ ID NO: 46:
SEQUENCE CHARACTERISTICS:
LENGTH: 33 amino acids
TYPE: amino acid
STRANDEDNESS: single
  Matches
   APPLICATION NUMBER: US/09/050,516
FILING DATE: CUNKNOWN>
APPLICATION NUMBER: 08/828,855
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REGISTRATION NUMBER: 6065.US.P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
COUNTRY: USA
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
   APPLICATION NUMBER: US/10/278,547
FILING DATE: 23-Oct-2002
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
  CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
  HODGES, STEVEN C.
KLASS, MICHAEL R.
KRATOCHVIL, JON D.
TITLE OF INVENTION: REAGENTS AND METHODS USEFUL
FOR DETECTING DISEASES OF THE GASTROINTESTINAL
TRACT
   NUMBER OF SEQUENCES:
  APPLICANT: BILLING-MEDEL, PATRICIA
   160 VDSAPPGQRKKEQWYAGINPSDGINSEVLE 189
  30;
  4 VDSAPPGQRKKEQWYAGINPSDGINSEVLE 33
  CITY: Abbott Park
STATE: IL
  TELEFAX: 847/938-2623
  14.0%; Score 30; DB 4; ilarity 100.0%; Pred. No. 5.4e-21 Conservative 0; Mismatches 0
   COLEN, MAURICE
COLDITTS, TRACEY L.
FRIEDMAN, PAULA N.
GORDON, JULIAN
GRANADOS, EDWARD N.
  HAYDEN, MARK
  Length 33;
  Indels
  <u>..</u>
  Gaps
  0
```

```
TOPOLOGY: linear;
; MOLECULE TYPE: NO. US20040043406Ale
; SEQUENCE DESCRIPTION: SEQ ID NO: 46:
US-10-646-873-46
Search completed: March 3, 2006, 14:50:28 Job time: 58.9206 secs
   片
   Ś
  Query Match 14.0%;
Best Local Similarity 100.0%;
Matches 30; Conservative C
   APPLICATION NUMBER: US/09/050,516

FILING DATE: 30-MAR-1998

APPLICATION UNMBER: 08/828,855

FILING DATE: 31-MAR-1997

ATTORNEY/AGENT IMPORMATION:
   PRIOR APPLICATION DATA:
   160 VDSAPPGQRKKEQWYAGINPSDGINSEVLE 189
   APPLICATION NUMBER: US/10/646,873 FILING DATE: 22-Aug-2003
   CLASSIFICATION: <Unknown>
   Score 30; DB 4; Length 33; pred. No. 5.4e-21;
   0; Mismatches
  <u>ω</u>
   Indels
   0
   Gaps
```

```
OM protein - protein search, using sw model
  Result
No.
   Run on:
   Minimum DB seq length: 0
Maximum DB seq length: 2000000000
   Post-processing: Listing first 500 summaries
   Total number of hits satisfying chosen parameters:
  Searched:
   දියගන්තීව ලබනිල ද
   Sequence:
   Title:
Perfect score:
No matches found
   Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
   Query
Score Match Length DB ID
  Published Applications AA_New:*
1: /cgn2_6/ptodata/1/pubpaa/USO8_NEW_PUB.pep:*
2: /cgn2_6/ptodata/1/pubpaa/USO6_NEW_PUB.pep:*
3: /cgn2_6/ptodata/1/pubpaa/USO7_NEW_PUB.pep:*
4: /cgn2_6/ptodata/1/pubpaa/USO7_NEW_PUB.pep:*
5: /cgn2_6/ptodata/1/pubpaa/USO1_NEW_PUB.pep:*
6: /cgn2_6/ptodata/1/pubpaa/USO1_NEW_PUB.pep:*
7: /cgn2_6/ptodata/1/pubpaa/USO1_NEW_PUB.pep:*
8: /cgn2_6/ptodata/1/pubpaa/USO1_NEW_PUB.pep:*
   OMEGO Gapop 60.0 , Gapext 60.0
   US-10-646-873-47
215
  March 3, 2006, 14:46:31 , Search time 6.0123 Seconds (without alignments) 715.215 Million cell updates/sec
   135346 seqs, 20000420 residues
   1 MSPRHLSESSGKPLSTKQEA.....HKNAMAERWESRIYASEEDD 215
  GenCore version 5.1.7 Copyright (c) 1993 - 2006 Biocceleration Ltd.
   SUMMARIES
  0
  Description
```

Search completed: March 3, 2006, 14:50:59 Job time : 6.0123 BecB

Coan hope Soc side